



**US Army Corps  
of Engineers**  
USACE Professional  
Development Support  
Center (PDSC)

# **The Purple Book and PROSPECT Training Needs Survey FY2001**



**MANAGERS  
AND SUPERVISORS  
TRAINING HANDBOOK**

CEHRP 350-1-1



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## MANAGERS AND SUPERVISORS TRAINING HANDBOOK

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## HOW TO USE THIS HANDBOOK

Training is a vital part of any organization. This has never been more true than in this time of accelerated change. Training needs change as the organization changes. Government downsizing has caused peoples' jobs to change to include new tasks and responsibilities. Training is needed to ensure success. To be effective, an organization's training system should be at least as dynamic as the organization. This handbook is issued as a tool to help satisfy those needs.

This handbook is divided into 7 sections. Section 1 contains: (a) FY2001 Survey of Training Needs Instructions with FY2001 PROSPECT Program Schedule; (b) Training information which helps the supervisor to use the handbook effectively; and (c) Continuing Education Credits listing. Sections 2 through 6 of this handbook describe courses available to Corps of Engineers and other government agency employees from various sources. Section 7 is for Corps of Engineers use only. Each section has specific school information about where, how, cost, and who to contact. Use the course purpose, description, and prerequisites to guide in your selection of courses best adapted to individual needs, by answering such questions as "What does this employee need to know or be able to do?", "Is the employee ready for this course?", "Has this employee already had this course or learned the skills the course will provide?".



## SURVEY INSTRUCTIONS

1. Use this catalog to determine your FY2001 training requirements for the Proponent-Sponsored Engineer Corps Training (PROSPECT) Program. The catalog contains our projected schedule of classroom courses for FY2001. The catalog is divided into 9 sections:

Section 1: Survey Instructions/Schedule and General Information  
 Section 2: PROSPECT Classroom Training  
 Section 3: Distance Learning Training  
 Section 4: Environmental Training  
 Section 5: Federal Executive Institute (FEI) and Executive Seminar Center (ESC) Training  
 Section 6: Long Term Training  
 Section 7: Army Service Schools and Defense Management Education and Training (DMET) (Corps Only)

2. Reporting Requirements for Classroom Sessions. Procedures for requesting quotas are distributed separately by your training coordinator. Division and District training coordinators will consolidate requirements and submit them electronically to the Professional Development Support Center (PDSC). Organizations who are unable to submit their requests electronically should complete the enclosed form and mail it to the Chief, USACE Professional Development Support Center, ATTN: CEHR-P-RG, PO Box 1600, Huntsville, AL 35807-4301. Each request for a space allocation will be submitted utilizing the priority system established by Headquarters, U.S. Army Corps of Engineers (HQUSACE):

<b>PRIORITY</b>	<b>DESCRIPTION</b>	<b>EXPLANATION</b>
1	Training - Skills, knowledges, and abilities needed now.	Planned utilization is now (next 6-12 months); therefore the training must be taken in the ensuing annual training cycle.
2	Education - Skills, knowledges and abilities needed.	Planned utilization is soon (12-24 months); therefore, the education should be taken in the ensuing annual training cycle or deferred until the following training cycle.
3	Development - Skills, knowledges, and abilities needed in the future.	Planned utilization is in the future (more than 24 months); therefore, the development may be taken in the ensuing annual training cycle, but can be deferred to some future training cycle.

3. Requests for onsite training sessions should be submitted to PDSC no later than 15 June 2000 using the Form on Page 1-12. Note that onsite session requests approximate normal class sizes, i.e., a course with a class size of 35 students in the regular survey should have an onsite requirement of at least 25 students to effectively utilize required resources. Requirements submitted for individual PROSPECT courses should not be included in onsite requests.



4. Tuition Billing System.

- a. The FY2001 PROSPECT Program will continue the “pay as you go” tuition system. This system is derived by each course paying for itself. Each course tuition is calculated by adding instructional costs plus overhead costs and dividing the total by the projected number of students. USACE Professional Development Support Center staff salaries are included in overhead costs. In most cases, no additional funding is provided.
  - b. Each organization pays tuition for the quotas allocated and travel and per diem for their students to attend the course.
  - c. Provided there are no date and location changes, your organization’s response is a commitment to pay for those spaces allocated. You should obligate funds for training spaces when you request them.
  - d. Non-Federal Government agencies (state or local) must prepay tuition not later than 30 days prior to the course start date. Further instructions on prepayment will be included in the final program announcement in August 2000.
5. Suspense Date. This FY2001 Training Requirements Survey is time sensitive to deadlines established by local training coordinators, the USACE Professional Development Support Center, and HQUSACE. All requirements must be received by 15 June 2000. Any requests for spaces received after this date will be considered on a space-available basis only.
6. Prerequisites. Course descriptions contain prerequisites required for a specific course. It is crucial that course nominees or substitute nominees meet all listed prerequisites. Students that do not meet the course prerequisites must submit a request for waiver of a prerequisite to CEHR-P-RG prior to taking the class.
7. Cancellations. Cancellation of reservations in PROSPECT courses is permitted up to 30 days prior to the start date of the class. Requests must be in writing and authenticated by a supervisor. Cancellations received less than 30 days prior to the class start date for which no qualified standby student is available and no-shows will be billed for the applicable tuition. You should notify the PDSC Registrar, (CEHR-P-RG, 256-895-7421 or 256-895-7425) of a cancellation as soon as possible. The registrar maintains standby lists for many courses and most cancelled quotas can be filled if the cancellation is provided promptly. Your support in this policy assists us in maintaining the lowest possible tuition rates and in providing training to as many students as possible.
8. Point of Contact. Any questions regarding this survey should be referred through local training coordinators to Ms. Janice Perry, CE Registrar Division (CEHR-P-RG), 256-895-7464 or by E-Mail at Janice.J.Perry@usace.army.mil.
9. This publication and updates will be viewable on the internet at: <http://pdsc.usace.army.mil>.



[illegible]



## Onsite Training Request

To: CEHR-P-RG

From:

<i>Course Title</i>	<i>Ctrl. No.</i>	<i>No. Students</i>	<i>Suggested Dates</i>



### FY2001 PROSPECT PROGRAM SCHEDULE

Following is a complete list of courses/sessions being offered in FY2001. The courses are listed alphabetically by short title. Also provided is the course number (as required by Defense Civilian Personnel Data Systems (DCPDS), control number, class size, Continuing Education Units (CEUs) if appropriate, tuition amounts, and proposed locations and dates of each course and session listed. When the location is annotated "TBD" (to be determined) and the dates are blank, this information will be provided in the final program document you will receive in August 2000.

Due to the implementation of the Army Standardized Course Numbering System, the course numbers in column one are required for DCPDS. The three-digit control number is required for our local automated tracking system.

The regional concept for scheduling locations of the classroom courses include four regions: Western, Central, Northeastern, and Southeastern. Cities designated within the respective areas as the regional centers:

WESTERN REGION	CENTRAL REGION	NORTHEASTERN REGION	SOUTHEASTERN REGION
Portland, OR	Dallas/Ft. Worth, TX	Annapolis/Baltimore, MD	Atlanta, GA
Sacramento, CA	Denver, CO	Norfolk/Virginia Beach, VA	Huntsville, AL
Seattle, WA	St. Louis, MO		Jacksonville, FL
Albuquerque, NM			

Although most sessions surveyed will be held at these locations, there are a few exceptions: (a) site dependent courses, approximately 1/3 of the program, are excluded from this scheduling requirement (i.e., Vicksburg, Mississippi (WES); Davis, California (HEC); and Duck, North Carolina), and (b) courses in which a large number of applicants are from a city other than a designated regional center, (i.e., Omaha, Nebraska, in the Central Region) may be scheduled in that city.

A final assessment is made after survey requirements are received to determine the most economical option. Priority consideration is given to placement of classes in the Bevill Center in Huntsville, Alabama, the Corps training facility.

For estimating and planning purposes, the annual training needs survey includes specific locations for site-dependent courses and classes scheduled in Huntsville, Alabama. Prospective students are encouraged to select the session closest to their assigned duty station. Cooperation of all parties - proponents, instructors, training coordinators, managers, and students - is needed to secure the benefits of lower travel costs through regional scheduling.



### ENVIRONMENTAL TRAINING

The courses listed below are being developed to meet specific needs of DOD Environmental Stewards. These courses will eventually be assigned by the Interservice Environmental Education Review Board (ISEERB) to a Lead Service School for implementation.

Inclusion of these courses at this time is for determining course participation need and interest.

<b><u>CONTROL#</u></b>	<b><u>TITLE</u></b>
961	BIODIVERSITY Conserving Biodiversity On Military Lands
962	ICRMP Integrated Cultural Resources Management Plan
963	INRMP Integrated Natural Resources Management Plan
964	INTRO TO NCR Introduction to Natural and Cultural Resources
965	INVASIVE SPECIES Invasive Species on Military Lands
966	MARINE MAMMALS Marine Mammals Awareness
967	NAT RES COMPLIANCE Natural Resources Compliance
968	TES ON MIL LANDS Threatened and Endangered Species (TES) on Military Lands
969	WETLANDS ON MIL LANDS Wetlands on Military Lands

\* You must indicate your interest in attending these courses by contacting the PDSC Registrars' Office by telephone at 256-895-7421 or 256-895-7425; by fax at 256-895-7469; or by email to Jackie.D.Moore@usace.army.mil or Sherry.M.Whitaker@usace.army.mil.



## TRAINING INFORMATION

### 1. Laws and Regulations.

- a. The Government Employees Training Act (PL 85-507), known as GETA. A copy of this Act may be obtained from your training officer.
- b. The Army Regulation, known as AR 690, Chapter 410. A copy of this regulation may be examined in the personnel division or the training office.
- c. Individual Division/District/Activity Procedures or Regulations. A copy of these regulations may be examined in the personnel division or the training office.

### 2. Definition of Training.

- a. Training is defined as the process of making available to an employee a planned and coordinated educational program of instruction in various fields which are or will be directly related to the performance of the employee's official duties for the government. This educational program should effectively increase the knowledge, proficiency, ability, skill, and qualifications of the employee in the performance of official duties.
- b. Official duties means the authorized duties which an employee is currently performing or those which he could reasonably be expected to perform in the future. This includes potential duties in a different job or occupation at the same or higher level than one currently held by the employee.

### 3. Principal Purpose of Training. The principal purpose of training is to provide the knowledges and skills needed:

- a. As a result of agency mission or program changes.
- b. As a result of new technology.
- c. As a result of new work assignments.
- d. To improve present performance.
- e. To meet future staffing needs.
- f. To develop unavailable skills.
- g. To meet the requirements for journeyman status in an apprenticeship program.

h. To provide orientation for new employees.

i. To provide adult basic education.

### 4. Training Facilities. The Government Employees Training Act provides for training of employees through either government or nongovernment facilities. However, training employees through nongovernment facilities is authorized only after the department head determines that adequate training through a government facility is not reasonably available. Further, each department shall provide for training, insofar as practicable, through those government facilities which are under the jurisdiction or control of the department.

### 5. Length and Types of Training. The Office of Personnel Management considers any training under 120 days to be short term training, while training over 120 days is long term training.

### 6. Payment of Training Expenses. The Government Employees Training Act authorizes the head of each department:

- a. To pay all or any part of the salary, pay, or compensation (excluding overtime, holiday, and night differential pay) of each employee selected and assigned for training through government or nongovernment facilities for each period of training.
- b. To pay or reimburse the employee for all or any part of the necessary expenses of each training assignment including the necessary costs of travel and per diem in lieu of subsistence; transportation of immediate family, household goods, and personal effects whenever the estimated cost of such transportation and related services is less than the estimated aggregate per diem payments for the period of training; tuition and matriculation fees; library and laboratory services; purchase or rental of books, materials, and supplies; and other services or facilities directly related to the training of the employee.

### 7. Limitation on Training in Nongovernment Facilities.

- a. Man-Year. The Government Employees Training Act provides that the number of man-years of training per department through nongovernment facilities in any fiscal year shall not exceed 1 per cent of the total number of man-years of civilian employment for each department in the same fiscal year.



- b. **Minimum Continuous Service.** No employee having less than 1 year of current, continuous civilian service in the government shall be eligible for training through nongovernment facilities unless the head of the department determines that such training is in the public interest. Exceptions to this requirement include short courses, correspondence courses, apprenticeship training, etc.
  - c. **Maximum Training in a 10-Year Period.** In the first 10-year period of the employee's continuous or noncontinuous civilian service in the government following the date of the initial entry into the civilian service of the government and in each 10-year period of service occurring thereafter, the time spent by an employee in training through nongovernment facilities shall not exceed 1 year.
  - d. **Academic Degree Restrictions.** GETA states that nothing contained in this Act shall be construed to authorize the selection and assignment of any employee for training through any nongovernment facility under authority of this Act, or the payment or reimbursement by the government of the costs of such training, either:
    - (1) For the purpose of providing an opportunity to such employee to obtain an academic degree in order to qualify for appointment to a particular position.
    - (2) Solely for the purpose of providing an opportunity to an employee to obtain one or more academic degrees. This prohibition of training for the sole purpose of attaining a degree is not to be construed as limiting the authority of an agency to assign employees to training in nongovernment facilities when the training is for the purpose of developing those skills, abilities, and knowledges which will best qualify them for the performance of official duties. If, in the accomplishment of this training, an employee receives an academic degree, this may be considered as merely an incidental by-product of the training.
  - e. **Training for Promotion.** Training an employee through a nongovernment facility for the purpose of filling a position by promotion is prohibited if there is another employee within the department who has equal ability and suitability and is fully qualified to fill the position and who is available at or within a reasonable distance from the place where the duties of the position are to be performed. Since this requires department-wide consideration, an agency shall request all other agencies to refer employees considered fully qualified and available for the position in the area of consideration. The area of consideration need not be greater than the local commuting area of the position.
  - f. **Continued Service Agreements.** Each employee who is selected for training through a nongovernment facility under authority of GETA shall, prior to the actual assignment for training, enter into a written agreement with the government to the effect that:
    - (1) After the expiration of the period of training the employee will continue in the service of the department for a period of at least equal to three times the length of the period of training unless involuntarily separated from the service of the department.
    - (2) If the employee is voluntarily separated from the service of the department prior to the expiration of the period for which the employee has agreed to continue in the service of the department after such training, the employee will pay the government the amount of the additional expenses incurred by the government in connection with his training. No employee selected for such training shall be assigned thereto unless he has entered into such agreement.
8. **Responsibility for Training.**
- a. Managers are responsible for training their subordinates. If an employee fails an assignment because of the lack of training, the supervisor is held responsible and not the employee. It is the supervisor's responsibility to ask the superior or available personnel technician for assistance needed. Each activity should encourage employee self-development by providing suitable recognition of improvements in performance that result from training.
  - b. The basic responsibility for each employee's development rests with the employee. Each employee is encouraged to show initiative in training opportunities and to demonstrate improvements that result from training. When an employee is selected for training, he/she is obligated to give the best thought and effort to that training.



9. Selection for Training.

- a. Each agency must establish procedures necessary to insure that:
  - (1) In the selection of employees for training, there is no discrimination because of race, color, religion, sex, national origin, age, or other factors unrelated to the need for training.
  - (2) Eligible employees will have a reasonable opportunity for consideration in selection for training which is to result in promotion. Merit promotion procedures must be followed in selecting career or career-conditional employees for training that is given primarily to prepare trainees for advancement and that is required for promotion. These requirements have been established in the interests of fair and equitable treatment of employees as required by the law and principles underlying the Federal Merit Promotion Program.
- b. Factors such as the following may be considered in selecting from among those who might be trained:
  - (1) The relative degree of employees' need for training.
  - (2) The relative potential of employees for advancement.
  - (3) The relative extent to which employees' knowledge, skill, attitudes, or performance are likely to be improved by training.
  - (4) The relative ability of employees to pass training to others upon returning to the job.
  - (5) The relative length of time and degree to which the agency expects to benefit from the employees' improved knowledge, skills, attitudes, and performance.
  - (6) Training opportunities previously afforded employees by the agency.
  - (7) The employees' own interest in and efforts to improve their work.

**CONTINUING  
EDUCATION CREDITS**

Many state and other certifying and licensing bodies are now requiring continuing education credits in order to maintain licenses and certification. The various continuing education credits are a means through which qualified, noncredit-granting organizations provide their students a standardized system for measuring their courses.

There are no national criteria for most professions. Criteria are generally established by individual states and certifying or licensing bodies. Each state, licensing body, or certifying body makes its own determination as to what the requirements are and which training qualifies. There is no guarantee that a state, certifying body, or licensing body will accept the training for continuing education credit. However, the fact that credits have been earned in accordance with established, stringent criteria created by national professional organizations should positively influence the body's decision.

To aid the professionals who take Proponent Sponsored Engineer Corps Training (PROSPECT) courses to earn required credits while participating in high quality programs taught by practicing professionals, the PROSPECT Program has undergone a rigorous certification/registration process by the professional organizations listed below in order to award the stated types of continuing education credited for select PROSPECT courses:

CEU (Continuing Education Unit): The USACE Professional Development Support Center meets the criteria for Certified Provider established by the Certified Provider Commission of the International Association for Continuing Education and Training, 1620 I Street, NW, Washington, DC 20006.

LU (Learning Unit): The USACE Professional Development Support Center meets the criteria for Registered Provider established by the American Institute of Architects Continuing Education System, 1735 New York Avenue, NW, Washington, DC 20006.

PDH (Professional Development Hour): The USACE Professional Development Support Center meets the criteria for Registered Provider established by the National Society for Professional Engineers, 1420 King Street, Alexandria, VA 22314.

The PROSPECT courses listed on the next page(s) meet the criteria for CEU, LU, and/or PDH. The course description for each of these courses (Managers and Supervisors Training Handbook) also lists the credits that are given for that particular course. Additionally, course completion certificates show the type and number of credits earned. Managers and employees should consider these courses as a source of training to meet continuing education requirements when developing a member's Individual Development Plan.



For additional information about these continuing education and training credits, visit our website at: <http://pdsc.usace.army.mil>.

### COURSES APPROVED FOR CEUS

Title	Crs #	CEUs	LUs	PDHs
Adv Streambank Prot	394	3.2		32
AE Contracting	004	3.1	31	31
Arch Hardware - QV	003		31	
Arch Hardware - Specs	005		31	
Budget Training	254	3.3		
CE Contract Law	342	2.8		28
Coastal Ecology	263	2.6		
Coastal Eng Proj/Des	013	2.7		27
Concrete I - QV	021	2.4	24	
Concrete I - QV	731		30	
Concrete II - QV	332		30	
Concrete Technology	022	2.5	25	25
Const Cont Admin	366	2.5	25	25
Const Quality Mgt	029	1.5	15	15
Const Quality Mgt	734		24	
Construction Safety	215		24	
Contracting Overview	742		20	
Cost-Reimburse Contr	001	2.5		25
CW Programming	358	3.1		
Design-Build	425	3.1		
Dist Ofcr Intro	334	6.7		
Dredge Estimating	118	2.8		28
Dredge: Cont Admin	211	1.8		18
Dredging Fund	333	2.5		25
E&D Quality Mgt	208	1.7	17	17
Earthwork I - QV	040	2.4		
Elec Exterior Design	090	3.3		33
Electrical - QV	042	3.0	30	30
Electrical Design I	373	3.3		33
Electrical Design II	374	3.3		33
Env Reg Prac Appl	398	2.2		22
Env Impact Assess	169		31	
Environ Laws/Regs	170		31	
ERGO Compliance	767	1.0		
Est For Const Mods	180	2.9	29	29
Financial Mgt for CE	012	3.3		
Fire Protection	006		31	
Flex Pave Const-QV	050	2.9		29
Flood Cont Chan Des	396	3.2		32
Fund Coastal Engr	011	2.8		28
Fund Wetlands	272	2.3		23
General Const-QV Intro	738		28	
General Const-QV	054	3.3	33	33
GIS Introduction	205	2.2		
GPS/GIS Applications	187	2.8		28
Hist Structures I	392	2.8	28	28
Hist Structures II	163	2.5	25	25
HTRW CERCLA/RCRA	356	2.1		21
HTRW Const Insp	141	2.7		27
HTRW Env Sampl	225	3.3		33
HTRW Overview	350	1.1		11
HTRW Risk Assess	222	3.4		
HTRW Risk Mgt	221	1.9		
HTW Remed Tech	395	2.9		29

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Human Resour Mgt III	303		31	
Human Resour Mgt IV	034		31	
Human Resour Mgt I	301		31	
HVAC Ctr Sys: Design	340	3.1		31
HVAC Design: Basic	391	3.3		33
HVAC O&M	246	3.1		
HVAC Sys TA&B-QV	068	3.0		30
HW Manifesting	223	3.4		
Hydra Des Outlet/Spill	062	2.8		
Hydro Survey Tech	056	3.0		30
Interior Design	335	2.8	21	21
Landscape QV	755		16	
M32 Advanced	312	2.8	28	28
M32 Basic	305		36	
Masonry	752		12	
Masonry Struc Des	317		34	
Master Planning	075	2.5	25	25
MDS - Designer	284		31	
MDS - Programmer	186		31	
Mech Systems Comm	327	3.0		30
Mechanical - QV	074	3.2		32
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National Elec Code	078	3.0		30
Neg Const Cont Mods	368	2.5	25	25
O&M Contracts	119	2.6		26
O&M Contracts Adv	318	1.8		18
Paint	084	3.1	31	31
Paint Coatings (Sub)	083	2.6		
Pln/Des Deep Nav Chn	346	3.2		32
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Project Management	355	2.3	23	23
Project Mgt - HTRW/OE	260	3.0	30	
Project Mgt - Mil Prog	088	3.1	31	31
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RE Appraisal/Leasing	102	3.0		
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## PROPONENT SPONSORED ENGINEER CORPS TRAINING (PROSPECT)

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**PROSPECT PROGRAM  
COURSE LONG TITLE CHANGES**

<b>Previous Title:</b>	Civil Works Programming and Budgeting (# 358)
<b>New Title:</b>	Civil Works Programming Process
<b>Previous Title:</b>	Diving Safety (#035) Diving Supervisor (#036)
<b>New Title:</b>	Working Diver and Supervision
<b>Previous Title:</b>	Geotechnical Aspects of Hazardous and Toxic Waste Sites (#395)
<b>New Title:</b>	HTW Remediation Technologies HTW Remediation Technologies-Containment HTW Remediation Technologies-Insitu
<b>Previous Title:</b>	Quality Assurance for Environmental Sampling for HTRW Sites (#225)
<b>New Title:</b>	Hazardous/Toxic and Radioactive Waste Environmental Sampling

**PROSPECT PROGRAM  
SHORT TITLE CHANGES**

<b>Previous Title:</b>	CW Prog and Budget (#358)
<b>New Title:</b>	CW Programming Process
<b>Previous Title:</b>	Diving Safety (#035) Diving Supervisor (#036)
<b>New Title:</b>	Working Diver
<b>Previous Title:</b>	DPW Budget (#981)
<b>New Title:</b>	DPW Budget/JCA
<b>Previous Title:</b>	Env Reg Appl (#316)
<b>New Title:</b>	Env Reg Prac Appl
<b>Previous Title:</b>	Flood Damage Tools (#316)
<b>New Title:</b>	Flood Damage – GIS
<b>Previous Title:</b>	Geotech Aspects/HTW (#395)
<b>New Title:</b>	HTW Remed Technologies HTW Remed Tech – Contain HTW Remed Tech - Insitu
<b>Previous Title:</b>	Groundwater Model (#108)
<b>New Title:</b>	Groundwater Modeling
<b>Previous Title:</b>	HVAC Control O&M (#246)
<b>New Title:</b>	HVAC Ctrl Sys: O&M
<b>Previous Title:</b>	HVAC Control Systems (#340)
<b>New Title:</b>	HVAC Ctr Sys: Design
<b>Previous Title:</b>	HVAC Sys Constr: QV (#382)
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<b>Previous Title:</b>	Instl Support – XXI (#390)
<b>New Title:</b>	Instl Support



**Previous Title:**  
QA Env Sampl (#225)

**New Title:**  
HTRW Env Sampling

**Previous Title:**  
Unsteady Flow Analysis (#188)

**New Title:**  
Unsteady Flow – HEC-RAS

### PROSPECT COURSES/WORKSHOPS ADDED TO INVENTORY

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### PROSPECT COURSES DELETED FROM INVENTORY

#### COURSES DELETED FROM INVENTORY FY2000

A-E Cost Contracting (#292) *(removed but not included  
in FY2000 Purple Book Deletions)*

#### COURSES DELETED FROM INVENTORY FY2001

Advanced Mapping (#435)

Architect-Engineer Contract Administration Support  
System (ACASS) and Construction Contractor Ap-  
praisal System (CCASS) (#174)

Army Reserve Engineer Management – Construction  
and Real Estate (AREM -C&RE) (#385)

DPW Engineering, Plans and Services Course (DPW  
EP&S) (#993)

DPW Engineer Resource Management Course (DPW  
ERM) (#978)

DPW Operations and Maintenance Course (DPW O&M)  
(#975)

Energy Management in Existing Federal Facilities (#055)

Facility Support Electrical I (#018)

Facility Support Electrical II (#030)

HTRW Cost Engineering (#226)

Library Automation (#146)

Library Science (#149)

Management of EPA Superfund Interagency Agree-  
ments (IAGs) and Cost Recovery Workshop (#447)

Regulatory VI – Expert Witness (#311)

Simplified Design and Acquisition Methodologies  
(SDAM) (#432)



## **PROPONENT SPONSORED ENGINEER CORPS TRAINING (PROSPECT)**

### **GENERAL**

The courses in this section are developed to meet unique Corps of Engineers and other government agency training needs. They are taught by Corps employees (parttime instructors) from HQUSACE, divisions, districts, and laboratories or are contracted to universities/private firms.

### **NOMINATION PROCEDURES**

The USACE Professional Development Support Center (CEHR-P) conducts an annual "Survey of Training Needs" (requirements) in May/June. The PROSPECT survey is distributed through each Training Coordinator to supervisors and managers. New and existing course descriptions, title, number, tuition, dates, and location are listed in this handbook (CEHRP 350-1-1). All requirements for attendance must be processed through your Training Coordinator to CEHR-P. These requirements are consolidated by CEHR-P and allocations are announced by Corps division or Agency Headquarters in the "Annual Program Announcement."

### **ADDRESS**

Commander  
USACE Professional Development Support Center  
ATTN: CEHR-P-RG (Registrar)  
PO Box 1600  
Huntsville, AL 35807-4301

### **COST**

Tuition, travel, and per diem costs are all paid by your activity.

### **STUDENT NOTIFICATION**

A Student Information Letter is either electronically transmitted or mailed approximately 60 days before the month in which the class session is to be held. This letter informs the student of hotel/classroom accommodations and any other pertinent course information.



### 1391 PREPARATION

**Long Title:** *DD Form 1391 Preparation*

**253**                      **Length: 36 Hours**                      **5413901A**  
**CEUs: 0.0**    **Tuition: \$1,200.00**

**Purpose.** This course provides a logical framework for preparing the DD Form 1391, "Military Construction Project Data," and provides working knowledge on how to verify requirements, documentation, review, certify, and program a project to request congressional appropriation and authorization of military construction (MILCON) funds.

**Description.** Identification and verification of project requirements: (a) project requirement identification and definition; (b) required verification and justification; (c) alternative considerations; (d) criteria and standards; and (e) practical exercises (case study).

Preparation of DD Form 1391 and related documentation: (1) detailed justification; (2) supplemental data preparation; and (3) project summary.

Programming policies and procedures: (a) DA/HQUSACE military construction policies; (b) program development cycle for military construction; (c) appropriations and programs that provide for military construction; (d) program formulation and approval; (e) congressional interest; (f) MACOM/MS/HQUSACE/USAISEC/HQDA review, certification and approval process; and (g) how to sell a project.

Overview of automated applications to support the military construction process.

**Prerequisites.** (a) Personnel at all levels, (installation, MACOM, USACE district, USACE division, HQDA, OSD), who are assigned to prepare, review, certify, approve, or use (e.g., design project managers) DD Forms 1391 (including personnel from other services and defense agencies and the private sector who are involved in DD Form 1391 Preparation); (b) Occupational series: 0800, 0020, and other personnel involved in DD Form 1391 process; (c) Grade: GS-05 and above; (d) nominees should have 6 months "on-the-job" training prior to attending this course. A hand-held calculator should be brought to the course.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2001-1	Huntsville, AL	5/21/2001 5/25/2001

### 1391 PROCESSOR

**Long Title:** *DD 1391 Processor System*  
*[\*\*Modernized\*\*]*

**252**                      **Length: 36 Hours**                      **5413P01A**  
**CEUs: 0.0**    **Tuition: \$850.00**

**Purpose.** The DD Form 1391 Processor System, which has been modernized to a web-enabled environ-

ment, is the means for documenting and submitting military construction project requirements and justification data for funding requests to Congress. Through lectures and practical exercise sessions, this course introduces the student to the capabilities, formats, functions, and usage procedures of the DD Form 1391 Processor System. The DD Form 1391 Processor System allows the user to prepare, edit, query, submit, review, and distribute DD Forms 1391 electronically using a personal computer.

**Description.** Topics covered include creating, submitting, reviewing, and editing individual DD Forms 1391 as well as creating directories and custom reports. The custom reporting and directory features can assist an organization in managing their military construction program. All features of the system are covered.

**Prerequisites.** Nominees must be assigned current positions involved in preparing and/or reviewing the DD Form 1391 and related documentation associated with the military construction planning, programming, and budgeting process.

**Notes.** \*OTHER: The attendee must have been assigned a PAX computer user ID by HQUSACE (CEMP-MC) prior to attending the course. All computer charges incurred during the training will be billed to the user and are not included in the tuition for this course.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2001-1	Huntsville, AL	11/13/2000 11/17/2000

### A-E CONTRACTING

**Long Title:** *Architect-Engineer (A-E) Contracting*

**004**                      **Length: 36 Hours**                      **41AEP01A**  
**CEUs: 3.1**    **Tuition: \$630.00**

**Purpose.** This course is for engineers, architects, technicians, and project managers, contract specialists, and other personnel responsible for A-E contract procurement, or the supervision and administration of A-E contracts. The course provides a concentrated look at all aspects of A-E contracting from contract authorization, through contract award, to closeout.

**Description.** Through lectures, individual study, and work group activities, this course provides detailed explanations of the laws and regulations affecting the A-E acquisition process, selection, cost principles, preparation of Government cost estimates, cost or pricing data (truth-in-negotiations), negotiation strategies and techniques, contract award, and contract administration. Also covered are types of A-E contracts, applicable contract clauses, proposal analysis, contractor liability, performance evaluations, and the A-E Contract Administration Support System (ACASS).

**Prerequisites.** Nominees must be assigned (a) Occupational Series: 0340, 0800, 0900, and 1100. (b) Grade: GS-11 or above. Lower grade employees are eligible only if their current duties are directly related to



A-E contracting. (c) Employees with current assignments which entail selection, negotiation of and/or administration of A-E contracts and modifications are eligible. (d) Nominees must not have attended similar courses within the past 3 years.

Session	Location	Date
2001-1	Balt/Annapolis, MD	10/23/2000 10/27/2000
2001-2	St. Louis, MO	12/4/2000 12/8/2000
2001-3	Seattle, WA	1/22/2001 1/26/2001
2001-4	Huntsville, AL	2/26/2001 3/2/2001
2001-5	Jacksonville, FL	3/26/2001 3/30/2001
2001-6	Dal/Ft. Worth, TX	4/23/2001 4/27/2001
2001-7	Albuquerque, NM	6/4/2001 6/8/2001

**NEW**

### ACCOUNT MANAGEMENT WORKSHOP

**Long Title:** Account Management Workshop

**449**                      **Length: 16 Hours**                      **15AMW01A**

**Purpose.** This workshop focuses on the second and third phase of the Customer Outreach Cycle—account planning and implementation. It answers the question: “What are the goals and strategies to further the business relationship with an organization’s strategic or key customers?”

**Description.** This workshop session can be offered in either an 8 hour or 16 hour workshop. The objective of the workshop is to develop customer account plan (s). The workshop is designed for onsite presentations at districts and division locations. For more information about an onsite session, please contact Joy Rodriguez, (256) 895-7448.

**Prerequisites.** This workshop is designed for organizational personnel directly responsible for developing and furthering business relationships with a specific customer.

Session	Location	Date
2001-1	DATES AND LOCATION TBD	

### ADV PAVEMENT DESIGN

**Long Title:** Advanced Concepts in Pavement Design and Evaluation

**357**                      **Length: 36 Hours**                      **35APD01A**  
**CEUs: 0.0**    **Tuition: \$2,310.00**

**Purpose.** This course integrates advanced theories and applications of computer models in designing and evaluating pavements. Its intention is to analyze the development and rationale underlying the procedures.

**Description.** The primary topics covered in this course are (a) Theory of California Bearing Ratio Design; (b) Westergaard Rigid Pavement Design; (c) Layered Elastic Theory, Analysis, and Design; (d) Laboratory Test Procedures for Resilient Modulus; (e) Design for Frost Conditions; (f) Frost Susceptibility Evaluation; (g) Back

Calculation of Pavement Properties from Nondestructive Testing; (h) Standard Practices in Pavement Design; (i) Influences of Construction, Internal Drainage; (j) Rapid Draining Base; (k) Theory of Overlay Design; (l) Alternate Base and Subbase Material; (m) Hydraulic and Thermal Properties of Soil and Paving Material; and (n) Geometry Design for Airfields. About fifty (50) percent of the sessions involve the demonstration and/or use of microcomputers.

**Prerequisites.** Nominees must be assigned Occupational Series: Selected 0800. Selected students should be pavement design engineers, facility engineers, and engineers of other MACOMs and federal agencies involved in evaluating pavement. Selected students must have engineering degrees, at least 1 year experience in pavement design, and must have taken the Pavement Design course (#085) or an equivalent graduate level course. Experience in using microcomputers is recommended.

Session	Location	Date
2001-1	Vicksburg, MS	4/30/2001 5/4/2001

### ADV STREAMBANK PROT

**Long Title:** Advanced Streambank Protection

**394**                      **Length: 36 Hours**                      **35ASP01A**  
**CEUs: 3.2**    **Tuition: \$2,160.00**

**Purpose.** Building on information presented in the Streambank Erosion and Protection course (#285), this course provides project managers, planners, technicians, engineers, biologists, designers, regulators, and personnel involved in permit review and Section 14, 1135, and 206 projects, with advanced training in the geomorphological aspects of river planform, the hydraulic and geotechnical processes related to specific streambank and bed erosion problems and their effect on the stream system, advanced training and design criteria for recently developed innovative protection techniques, and a short introduction to the benefits and importance of streamside riparian zone restoration.

**Description.** The majority of this class will be taught in the field. Classroom lectures will cover recently developed protection techniques, such as: Lunkers, Ajax, Newbury rocked riffles, and dormant willow post method. Utilizing a group of nationally recognized instructors, students will participate in a series of half- and full-day field trips to investigate a wide array of stream types (differing sizes, slopes, bed materials) within a 150 mile radius of Vicksburg, MS. Videos regarding erosion and stabilization will be viewed during the bus trips. Over 25 streamside, interactive mini-lectures will be presented in the field, with subjects to include: identifying dominant hydraulic, geotechnical, and morphological processes, analyzing trees and roots, transitions, bed gradation sampling techniques, vegetative roughness analysis, the role of Large Woody Debris in bank protection (hydraulic, geotechnical, and environmental considerations), where is vegetation appropri-



ate, and vegetative secession. The long-term performance (hydraulic, geotechnical, and environmental) and effectiveness of several grade control and streambank protection projects will be analyzed. Some projects are over 20 years old. Some failed sites will be reviewed. Repair or redesign and replacement of these projects will be discussed. Using advanced geomorphic analyses techniques, several severe bank erosion and bed degradation sites will be reviewed from both a local, and system-wide perspective. For these sites, project goals will be formulated and conceptual designs developed. In-class discussion will focus on further review of completed projects, failures, and erosion problems studied during the field trips. Students are encouraged to give a brief presentation of a current project for group discussion and review.

**Learning Objectives:** At the conclusion of this course the student will be able to develop a set of project goals, conduct a field analysis of a local or system-wide stream instability problems, consider and analyze several alternative bank and grade protection treatments, develop a site-specific comprehensive treatment plan taking into consideration the long-term effects of the stream on the project, long-term project performance, environmental ramifications, cost effectiveness, both local and overall effects of the project on the stream system, and develop a long-term monitoring, maintenance, and repair plan for the project.

**Prerequisites.** Within the last five years the student must have completed the Streambank Erosion and Protection course (#285). Federal nominees must be assigned (a) Occupational Series: Selected 0000-0100, 0400, 0800, 1300, and (b) Grade GS-07 or above.

**Notes.** SPECIAL INSTRUCTIONS: A majority of class time will be spent on a series of field trips covering approximately 3 full days of class time investigating streams within a large portion of the state of Mississippi. Students will be required to climb streambanks and wade approximately one mile of stream over a period of 2 to 3 hours. Needed field equipment will be provided by WES. Students should bring appropriate field clothes for 4 days in the field, extra socks, a windbreaker, and rain gear.

Session	Location	Date
2001-1	Vicksburg, MS	4/9/2001 4/13/2001

### ADVANCED HEC-HMS

**Long Title:** *Advanced Application of HEC-HMS*

<b>369</b>	<b>Length: 36 Hours</b>	<b>35AHC01A</b>
<b>CEUs: 0.0</b>		<b>Tuition: \$1,880.00</b>

**Purpose.** This course provides instructions on advanced applications of the Corps' Hydrologic Modeling System, HEC-HMS. Emphasis is placed on capabilities not covered in the Basic HEC-HMS class and capabilities not contained in the predecessor HEC-1 software. The new hydrologic simulation techniques covered are: continuous simulation and spatially dis-

tributed, gridded runoff calculations. The basis for these new techniques will be provided and reinforced with practical hands-on workshops.

**Description.** The course covers new hydrologic methods (continuous simulation and gridded runoff calculation) not included in the Basic HEC-HMS or previous HEC-1 courses. Students will learn basic concepts and theories in lectures and apply them to practical hydrologic engineering problems in workshops. The theoretical basis for soil moisture accounting and how it is represented in HEC-HMS will emphasize practical means for identifying and calibrating rapid, moderate, and slow responding components of various watershed moisture storages. Another new capability is the spatially distributed runoff computation via a gridded representation of the watershed. Creation of a gridded watershed from digital terrain models using HEC-GeoHMS will be described and used in workshops. A new gridded snow accumulation and melt capability will also be used. The ModClark unit graph method will be used to transmit gridded rainfall and snowmelt excess (from radar rainfall and GIS solid infiltration) to the basin outlet. Improved methods for representing hydraulic structures in a hydrologic model will also be presented.

**Prerequisites.** Nominees must have a basic understanding of hydrologic processes and how they are represented in HEC-HMS. Students should have taken the Basic HEC-HMS course or had equivalent experience. Basic HEC-HMS navigation skills will not be taught in this class. Nominees must be assigned (a) Occupational Series: Selected 0800 and 1300; (b) Grade: GS-09 or above.

Session	Location	Date
2001-1	Davis, CA	8/20/2001 8/24/2001

### ADVANCED HEC-RAS

**Long Title:** *Advanced River Hydraulics with HEC-RAS*

<b>067</b>	<b>Length: 36 Hours</b>	<b>35AH201A</b>
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**Purpose.** This is an advanced course in applying computer program HEC-RAS. The course provides participants with the knowledge to effectively use computer program HEC-RAS to analyze difficult hydraulic conditions in natural and constructed channels.

**Description.** Topics include applications and limitations of one-dimensional models, effective use of HEC-RAS bridge analysis techniques, supercritical flow, efficient determination of floodways, use of the channel modification option to analyze proposed channel modifications, divided flow analysis, analysis of gated structures, modeling drop structures, and incorporating GIS data into HEC-RAS.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: Selected 0800 and 1300; (b) Grade: GS-9 or above. Students must be experienced engi-



neers who have attended Flood Plain Hydrology or Water Surface Profile Computation using HEC-RAS courses. Participants must be in positions where they are currently engaged in using HEC-RAS in hydraulic investigations.

### APPL OF ENGR GEOLOGY

**Long Title:** *Application of Engineering Geology*

**251**                      **Length: 36 Hours**                      **35AEG01A**  
**CEUs: 0.0**    **Tuition: \$1,295.00**

**Purpose.** This course presents a combined application of engineering geology, geophysics, and rock mechanics. The course is recommended for engineering geologists, design engineers, and construction engineers.

**Description.** Lectures, demonstrations, and reading assignments will cover: the history and evolution of Engineering Geology; Site Investigations; Basic Rock Mechanics; Rock Excavation; Foundation Treatment; Rock Reinforcement; Underground Construction; Ground Water; and Hazardous/Toxic/Radioactive Waste.

**Prerequisites.** Nominees should be assigned: Occupational Series: Selected 0800, 0810, 1310, and 1350; Grade: GS-07 or above and project management personnel.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2001-1	Huntsville, AL	7/16/2001 7/20/2001

### ARCH HARDWARE-QV

**Long Title:** *Quality Verification: Architectural Hardware*

**003**                      **Length: 36 Hours**                      **35AHQ01A**  
**CEUs: 0.0**    **Tuition: \$1,560.00**

**Purpose.** This course develops new skills oriented to the quality verification of hardware used in building construction and updates the student's knowledge of current industry practices and changes in specifications. It also provides training that results in a more effective quality assurance.

**Description.** This course presents the fundamentals of the industry including hardware materials and finishes-their purpose, use, and application; basic information covering all architectural hardware products, terminology, and types of doors and frames; and the fundamentals of hardware schedules, preparation, and use. Emphasis is placed on how to interpret a hardware schedule for installation purposes and field use, as well as an analysis of a hardware schedule submitted to the designer for approval.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: Selected 0800; (b) Grade: GS-05 or above; (c) current or projected assignment with re-

sponsibility for providing quality verification of hardware, specifying hardware, or reviewing hardware submittals from contractors for approval. Student must not have attended this or a similar course within the past 5 years.

**Notes.** This course contains requirements which are mandatory for course completion and may require an estimated 3 hours of overtime. It is your responsibility to bring this to the attention of your supervisor so that an overtime request/determination can be made by your appropriate personnel. It is also your responsibility to certify the amount of time expended on these requirements to your supervisor when you request overtime compensation.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2001-1	Denver, CO	7/9/2001 7/13/2001

### ARCH HARDWARE—SPECS

**Long Title:** *Architectural Hardware - Specifications*

**005**                      **Length: 36 Hours**                      **35AHS01A**

**Purpose.** This course develops skills oriented to specifying or approving builder's hardware used in building construction by the Corps of Engineers. The course covers current industry practices and specifications, problems involved in scheduling hardware, and effective quality assurance.

**Description.** The course presents architectural hardware fundamentals including materials and finishes; purpose, use, and application of the various hardware items; basic information on doors and frames; and the fundamentals of preparation and use of hardware schedules. Emphasis is placed on selecting proper hardware, specifying hardware, and preparing and reading hardware schedules.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: 0800; (b) Grade: GS-07 or above. Students should have a current or projected assignment involving specifying or approving hardware. Students should not have attended this or a similar course within the past 5 years.

### BASIC HEC-HMS

**Long Title:** *Flood Hydrology with HEC-HMS*

**178**                      **Length: 36 Hours**                      **35HAF01A**  
**CEUs: 0.0**    **Tuition: \$1,700.00**

**Purpose.** Participants will acquire knowledge and experience in simulating rainfall-runoff processes using the new Hydrologic Modeling System (HEC-HMS) as a tool. Applications include floodplain management, flood forecasting, and water resource planning.

**Description.** The course covers basic hydrologic engineering techniques for rainfall-runoff analysis. Topics include: basin average rainfall and loss rate deter-



mination, unit hydrograph techniques, streamflow routing, and methods for modeling runoff throughout a watershed composed of multiple subbasins and river reaches. Workshops will provide hands-on experience in applying these techniques using the HEC-HMS computer program. HEC-HMS is the next-generation successor to the HEC-1, Flood Hydrograph Package. HEC-HMS employs a graphical user interface to provide capabilities to create models, perform simulations, and review results. The program includes new capabilities for spatially distributed runoff and continuous simulation, and operates on a Windows PC or SUN X-window computer.

**Prerequisites.** Nominees should be assigned (a) Occupational Series: 0400, 0800, and 1300; (b) Grade: GS-07, or above. Course nominees should be in a position where they are, or will be within the next year, conducting flood studies involving rainfall-runoff modeling. Familiarity with Windows-based computer systems is desirable.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2001-1	Davis, CA	1/22/2001 1/26/2001

### BASICHEC-RAS

**Long Title:** *Water Surface Profile Computation Using HEC-RAS (Basic)*

**114**                      **Length: 36 Hours**                      **35BH201A**  
**CEUs: 0.0**    **Tuition: \$1,560.00**

**Purpose.** This course teaches the concepts of open channel flow, data requirements. HEC-RAS input requirements, application of bridge routines, channel improvement analysis, floodway determination, and output analysis. The next generation (HEC-RAS) software will be included in lectures and workshops.

**Description.** The course focuses on applying computer program HEC-RAS to compute steady-flow water surface profiles. Topics include concepts of open channel flow, data requirements, basic input requirements, output analysis, application of bridge and culvert routines, using the channel improvement option, and floodway determination. Participants have an opportunity to prepare input and analyze output during workshops.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: Selected 0800 and 1300; (b) Grade: GS-05 or above. Nominees must be engineers who perform professional work in the fields of hydrology and hydraulics. Nominees should have one or more years of experience in these areas. It is required that course participants be in positions or anticipate being in positions in the next year or two where they will be involved in water surface profile calculations or studies of the effects of channel improvements and levees.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2001-1	Davis, CA	11/13/2000 11/17/2000

### BOAT OPR LICENSE EXM

**Long Title:** *Boat Operator License Examiner*

**172**                      **Length: 64 Hours**                      **33BOL01A**  
**CEUs: 0.0**    **Tuition: \$2,720.00**

**Purpose.** This course trains, tests, and licenses individuals as motor boat operators and license examiners for the Corps of Engineers.

**Description.** Lectures, demonstrations, reading assignments, and practical exercises cover the areas listed below and enable students to perform duties as outlined in Engineer Regulation 385-1-91. Specific areas to be covered include (a) USACE Boat Licensing Policy; (b) required safety and normal equipment, and equipment maintenance; (c) boat orientation: (1) starting procedures, (2) checking equipment, (3) getting underway, and (4) refueling procedures; (d) trailers and trailer maintenance; (e) Marlinspike Seamanship; (f) navigation and rules of the road; (g) fire suppression; (h) course familiarization; (i) emergency procedures: (1) reaching, throwing, (2) self rescue, H.E.L.P., and huddle, (3) overboard drill, roll aboard; (j) boat operation; (k) secure operation; (l) repetitive boat exercises: (1) serpentine course, (2) transition serpentine, (3) avoidance course, (4) docking; (m) Concurrent Boat Exercise (Practical): (1) trailering, (2) launching and retrieving boats, (3) alongside maneuvering and boarding, (4) towing boats, (5) emergency procedures; (n) Boating Skills (Practical) and; (o) Safety Manual (EM 385-1-1) Review.

**Prerequisites.** Students should have been designated motor boat training duties at their facility. Individuals attending this course must be (a) able to swim in a Personal Flotation Device (PFD) for 100 yards; (b) an experienced motor boat operator; and (c) designated to train local motor boat operators in boating skills.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2001-1	Glynco, GA	8/14/2001 8/23/2001

### BUDGET TRAINING

**Long Title:** *Budget Training Course for Corps Employees*

**254**                      **Length: 36 Hours**                      **42BTC01A**  
**CEUs: 3.3**    **Tuition: \$930.00**

**Purpose.** This course is targeted for those civilian and military employees of the Corps of Engineers who work directly within the financial management arena. It provides a framework and knowledge of the federal budget process with specialized emphasis on policies and procedures of the Corps of Engineers. The objective is to provide a uniform understanding of Corps budgeting so that operations are improved/streamlined at all Corps organizational levels.



**Description.** The course describes program and budget activities at the HQUSACE, MSC, District, FOA, and Laboratory levels, and how these activities interrelate with those at Army, DOD, OMB, and the Congress. The curriculum is structured around the formulation and execution of an activity's operating budget. The material is presented through lectures and practical exercises covering various budgeting processes and budget-related issues. Major topics/areas include (a) operating budgets; (b) military and civil works programs; (c) military and civil works budgeting; (d) budget execution; (e) statutory and administrative limitations; and (f) special subjects, such as mobilization and CEFMS applications.

**Prerequisites.** Restricted to full time Corps members in the Grade of GS-11 (0-3) and higher who have significant financial management responsibilities in their commands. No waivers to this restriction are permitted.

Session	Location	Date	
2001-1	St. Louis, MO	4/2/2001	4/6/2001
2001-2	Pittsburgh, PA	6/11/2001	6/15/2001
2001-3	Albuquerque, NM	8/13/2001	8/17/2001

### CE CONTRACT LAW

**Long Title:** *Corps of Engineers Contract Law*

**342**                      **Length: 36 Hours**                      **37ECL01A**  
**CEUs: 2.8**

**Purpose.** This course is primarily intended to instruct USACE attorneys in the basic legal principles and procedures related to Corps of Engineers construction contracting. Attendees will be able to provide competent legal advice on contractual matters and to process contract actions such as bid protests, mistakes-in-bid, and claims and appeals.

**Description.** Through the use of lectures, workshops, and case study sessions, this course primarily addresses those aspects of construction contract law essential to successfully accomplishing the Corps' contract mission. This course is designed for training Corps of Engineers attorneys.

**Prerequisites.** Nominees must be assigned (a) Occupational series: 905; (b) Grade: GS-09 or above; (c) Other: This course is recommended for attendees that have had basic government procurement law training.

### CIVIL DESIGN/PLNG

**Long Title:** *Civil Design for Planning*

**218**                      **Length: 36 Hours**                      **35CDP01A**  
**CEUs: 0.0**    **Tuition: \$1,320.00**

**Purpose.** This course focuses on the Corps of Engineers CE Civil Works project process. It provides a general understanding of the engineering studies and sensitive engineering issues that impact and influence

project formulation, the reconnaissance and feasibility planning phase, as well as the preconstruction engineering and design phase. The course also discusses the processes involved in accomplishing studies (e.g. independent technical review, policy review, quality control), and tools (World Wide Web, mapping, risk based analysis, Project Management Plans, etc.). It is intended to reach newly assigned professional scientists/engineers within the engineering and planning functions of the Corps or those who are new to the Civil Works process.

**Description.** The objectives of this course are to develop knowledge, skills, and aptitudes within the Civil Works function regarding the new policies in the planning and design processes of developing an engineering project. After completing this course, the student should be able to more effectively accomplish a complicated CE Civil Works project. Topics include organization and development of resources required to execute the process, policy guidance, and various sensitive design concerns within the planning process, engineering overview, geotechnical, electrical/mechanical, hydrology and hydraulics, and structural engineering studies as well as geographical information systems. Emphasis is placed on the Independent Technical Review process, and successful navigation through the policy review process. This course tracks the Corps of Engineers management business process from the authorization of the first study to the completion of construction. The course was developed for CE Civil Works personnel and may be of reduced value to personnel from other agencies.

**Prerequisites.** Nominees should be on, or have a potential assignment to a Civil Works study team in the Planning or Engineering phases and have functional responsibilities within the Planning or Engineering divisions; (a) Occupational Series: All series; and (b) Grade: GS-07 through GS-13.

Session	Location	Date	
2001-1	Portland, OR	6/18/2001	6/22/2001

### CIVIL EMERGENCY MGT

**Long Title:** *Civil Emergency Management Course*

**112**                      **Length: 40 Hours**                      **58CEM01A**

**Purpose.** This course provides a comprehensive overview of the U.S. Army Corps of Engineers (USACE) Civil Emergency Management Program. The course includes studies of the policy and guidance associated with the USACE Flood Control and Coastal Emergency authority (PL 84-99), and, planning and managing operations in support of the Federal Emergency Management Agency (FEMA) under PL 93-288.

**Description.** Through lectures, case studies, discussions and exercises, the student receives training in the following areas: (a) USACE emergency responsibilities involving all-hazard natural disaster prepared-



ness, advance measures; emergency operations (flood and post flood response); rehabilitation of flood control works threatened or destroyed by flood; protection or repair of Federally authorized shore protection works threatened or damaged by coastal storm; and, provision of emergency water supplies needed as a result of drought or contaminated source; (b) the program authorities, policies and guidelines for executing FEMA PL 93-288 mission assignments related to natural and technological disasters, civil disturbances and terrorist activities; (c) the specific emergency response oriented program responsibilities of other functional elements within USACE; (d) implementation of the Readiness 2000 disaster preparedness and response initiative with an emphasis on Planning and Response Teams and FEMA mission assignments under PL 93-288.

**Prerequisites.** District and MSC emergency managers must approve nominations. In general, nominees should be: (a) emergency management personnel; (b) functional staff who occupy key leadership positions on speciality teams (i.e. Logistics, Communications, etc.) and/or whose responsibilities may require service as mission managers, mission coordinators or action officers; (c) others with special job requirements or qualifications. All emergency management personnel should have this course within the first two years of their assignment to the emergency management organization and every three years thereafter as a refresher. Chief, HQUSACE Civil Emergency Branch will have final approval authority over all nominations, based on the recommendation(s) of local and MSC emergency managers. As many skills and competencies are involved in planning and conducting emergency operations, there is no specific job series requirement to attend this course.

## CIVIL WORKS ORIENT

**Long Title: Civil Works Orientation**

**086**                      **Length: 36 Hours**                      **35PWR01A**  
**CEUs: 0.0**                      **Tuition: \$1,260.00**

**Purpose.** This course provides the student with a basic understanding of the Corps of Engineers civil works program and the project development process. It is designed for Corps employees who are relatively new to civil works or individuals who require an overall understanding of and the procedural stages involved in the development of civil works projects.

**Description.** Topics will be presented and discussed relating to the Civil Works process, including: overviews of the Corps missions, programs and organizational structure; legislative and review processes; study and project cost-sharing; program budgeting and funding; environmental compliance and HTRW considerations; public involvement; partnering and cooperation with non-Federal sponsors; and new trends and developments. The student will learn the entire Civil Works process from the problem identification to project imple-

mentation. Various individual, group, and class exercises; role-plays of Corps-sponsor meetings; and discussions are used throughout the course to help students understand the process.

**Prerequisites.** Nominees must be involved in or closely support civil works planning, project management, or programs management and must be assigned (a) Occupational Series: Selected 0020, 0100, 0300, 0400, 0800, 0900, 1100, and 1300 series or others such as public affairs officers, real estate, or counsel that support the development process; (b) Grade: GS-05 or above.

<u>Session</u>	<u>Location</u>	<u>Date</u>	<u>Date</u>
2001-1	Huntsville, AL	3/5/2001	3/9/2001
2001-2	Denver, CO	5/14/2001	5/18/2001
2001-3	San Francisco, CA	6/25/2001	6/29/2001

## CLEAN AIR ACT WORKSHOP

**Long Title: Environmental Compliance Requirements of the Clean Air Act Workshop**

**443**                      **Length: 20 Hours**                      **33CAW01A**  
**CEUs: 0.0**                      **Tuition: \$440.00**

**Purpose.** This workshop has been designed to introduce the student to the major programs of the Clean Air Act (CAA) and associated environmental compliance requirements. In addition to learning basic CAA regulatory requirements, students will be taught to identify when a CAA operating permit may be required.

**Description.** During the course of this workshop, students will gain a better understanding of the regulatory requirements pertaining to the major programs of the CAA including National Ambient Air Quality Standards, conformity of federal actions, New Source Review and Prevention of Significant Deterioration, hazardous air pollutant regulations including NESHAP and MACT standards, operating permits, air emission inventories, the use of emission factors, and the regulation of ozone depleting substances. Application of the standards to typical Corps projects will be addressed, including construction operations and HTRW remedial actions. Practical exercises will be performed throughout the workshop to provide the student with hands-on experience.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: Selected 0020, 0100, 0400, 0690, 0800, 0900, and 1300 or by demonstration of special needs related to job responsibilities; (b) Grade: GS-07 or above.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2001-1	Seattle, WA	3/6/2001 3/8/2001



## COASTAL ECOLOGY

### *Long Title: Coastal Ecology*

**263**                      **Length: 36 Hours**                      **33COE01A**  
**CEUs: 2.6**    **Tuition: \$2,760.00**

**Purpose.** This course provides Corps of Engineer personnel with state-of-the-art knowledge and technology in marine and coastal ecology. Students are given an overview of the latest scientific and analytical techniques in the field of coast ecology and related sciences.

**Description.** Through a series of lectures, practical exercises, and field trips, students are introduced to the basic concepts of marine/estuarine ecology (including benthic ecosystems, fisheries, coastal marsh and seagrass ecology), sensitive resources, experimental design, and current marine ecological techniques such as the Benthic Resources Assessment Techniques (BRAT) and the Sediment Profiling (SP) camera. The role and importance of coastal ecosystems will be discussed. Temperate, subtropical, and tropical ecosystems will be covered for the Gulf, Atlantic, and Pacific coasts.

**Prerequisites.** Nominees must be assigned: (a) Occupational series: 0020, 0400s, 0800s, and 1300s; (b) Grade: GS-09 and above; and (c) This course is meant primarily for engineers, scientists, and technicians with planning, operations, or regulatory duty assignments involving marine and coastal systems.

**Notes.** SPECIAL INSTRUCTIONS: This course involves extensive "hands-on" field exercises. Therefore, students should be prepared to work in a wet and muddy environment.

Session	Location	Date
2001-1	Monterey, CA	5/21/2001 5/25/2001

## COASTAL ENGINEERING

### *Long Title: Coastal Engineering*

**013**                      **Length: 36 Hours**                      **35CE201A**  
**CEUs: 2.7**

**Purpose.** This course provides formal and hands-on training in the fundamental processes, and functional and structural design elements required to work on coastal engineering projects. The emphasis is on learning and applying the basics of shore protection and navigation structure planning, design, rehabilitation, and maintenance. Attendees are introduced to coastal project and element alternatives, functions, and design procedures for structural and non-structural solutions. This course is intended primarily for planning, engineering, and construction or operations personnel needing state-of-the-art procedures and techniques for working with coastal projects. Course content will emphasize up-to-date technology and analysis tools specific to the needs of both newly assigned

and experienced practicing coastal engineers.

**Description.** Basic scientific principles and computational procedures presented in the "Shore Protection Manual" (SPM) and in completed portions of the "Coastal Engineering Manual" (CEM) will serve as the formal instructional foundation. Attendees will become familiar with the use of these same references plus the Automated Coastal Engineering Systems (ACES) and other numerical computational tools and models, physical models, and field data collection through lecture, case studies, and classroom exercises. Access to and use of USACE and other coastal processes and map data bases will be explored. These materials will be illustrated by the instructors' examples and through the hands-on use of calculator and PC scale computational technology. Attendees will be assigned to work on a team coastal engineering problem for presentation to the rest of the class. Attendees will become familiar with (1) coastal project development and structure design including navigation breakwaters and jetties, shore-connected and detached breakwaters, groins, seawalls, and revetments, and (2) the planning and design of beachfills, offshore berms, physical aspects of coastal wetland restoration, and dredging and material disposal management, and channel design. Attendees will learn the functional and structural design characteristics of different types of coastal structures and how to evaluate non-structural alternatives. Topics discussed are (a) wave structure interaction (i.e., wave run-up, overtopping, reflection and transmission); (b) selection of design parameters; (c) design and use of coastal armoring; (d) design and use of erosion control techniques; (e) design and use of navigation and harbor structures; (f) beach fill design and other sediment management projects; and (g) microcomputer computational tools.

**Prerequisites.** Engineers or scientists who have been assigned to coastal projects and who need in-depth knowledge on coastal planning, project design, and operational practices. Attendees should have some experience or background in coastal processes having taken either the PROSPECT Coastal Planning course or an equivalent university level coastal course. Grade: GS-09 or above.

## COASTAL PLANNING

### *Long Title: Coastal Project Planning*

**011**                      **Length: 36 Hours**                      **35CEN01A**  
**CEUs: 2.8**    **Tuition: \$2,180.00**

**Purpose.** This course provides a formal introduction to coastal project related technological and management issues including hydrodynamic and sediment transport processes, geological framework and evolution, and problems and solutions especially as they relate to the Corps of Engineers coastal planning and environmental management mission. It broadens the technological base of planners, engineers, managers, environmentalists, geologists, regulatory, and others involved in studies and projects of the coastal zone.







## CONCRETE II—QV

**Long Title:** *Quality Verification: Concrete II*

**332**                      **Length: 36 Hours**                      **35QV201A**  
**CEUs: 0.0**    **Tuition: \$2,340.00**

**Purpose.** This course provides the participant with the specific knowledge required to become certified by the American Concrete Institute (ACI) as a Concrete Transportation Construction Inspector. The Corps of Engineers EM 1110-2-2000 as well as several Guide Specifications requires that those individuals responsible for inspection of concrete construction be certified.

**Description.** This course is designed to upgrade the quality of concrete construction throughout the Corps of Engineers by providing training and certification to those individuals directly responsible for verifying concrete quality. Topics include role of the inspector, contract documents, concrete materials, pre-placement inspection, placement inspection, post-placement inspection, and transportation systems and applications, inspect and record inspection data for concrete pre-placement, placement, post-placement, soil-cement bases, piling installations, formwork installation and removal, reinforcement, embedments, conveying, placement, consolidation, fishing, jointing, curing and protection.

**ACI Certification Examination.** The participants will be required to pass a rigorous three-hour multiple-choice examination of approximately 80 questions and a one-hour engineering plans examination of approximately 20 questions. A score of 70 percent or higher constitutes a passing grade on the examination. The examination is open-book, but the technical materials allowed into the examination room are restricted to those listed as resource materials approved by ACI.

**Special Requirements.** In order to be qualified for full inspector certification, your education and/or work experience must meet at least one of the following criteria: (1) A minimum of two years (60 credit hours) of college or technical school plus two years of work experience in transportation concrete inspection and/or field testing of concrete. A copy of your diploma or transcript is required; (2) High school graduate equivalent plus a minimum of three years of work experience in transportation concrete inspection and/or field testing of concrete. A copy of your diploma or equivalent is required; and (3) Five years of work experience in transportation concrete inspection and/or field testing of concrete. Your work experience as required above must include: (1) Decision-making responsibility and authority; (2) Verification of compliance with plans, specifications, and codes; (3) Evaluation of concrete construction in the field; (4) Documentation and reporting of inspection results; and (5) Proficiency in the following areas of inspection: soil-cement, piling installation, formwork installation and removal, reinforcement, embedments, sampling and testing of freshly-mixed concrete, con-

veyance, placement, consolidation, finishing, jointing, curing and protection. The examination provided in this course is only part of the requirements for ACI inspector certification. The qualification of each individual is determined by the ACI Certification Program.

**Prerequisites.** Nominees must have taken the PROSPECT classroom course "Quality Verification: Concrete I" or the PROSPECT distance learning course "Concrete Inspection NT". No exceptions. In addition to this, nominees must be currently certified as an ACI Concrete Field Technician-Grade I. This certification can be obtained through successful completion of training courses conducted throughout the country by ACI Local Sponsoring Groups. Nominees should be assigned (a) Occupational Series: 0802, 0809, and 0810; (b) Grade: GS-07 and above.

Session	Location	Date
2001-1	Vicksburg, MS	4/30/2001 5/4/2001

## CONCRETE MAINT & REP

**Long Title:** *Concrete Maintenance and Repair*

**257**                      **Length: 36 Hours**                      **35CMR01A**  
**CEUs: 0.0**    **Tuition: \$1,280.00**

**Purpose.** This course provides the participant with specific knowledge of materials, techniques, and procedures for repair of cracked and deteriorated concrete and for maintenance of sound concrete.

**Description.** Through lecture and demonstration sessions, the student will be able to identify the causes of distress, determine extent of failure, list advantages and disadvantages of making repairs, and recommend methods of repair with concrete, shotcrete, mortars, epoxy resins, surface coatings, and joint sealants. This course does not cover maintenance and repair of concrete pavements.

**Prerequisites.** Nominee must be assigned (a) Occupational Series: Selected 0800 series; (b) GS-05 or above; (c) Other: student should have a current or projected assignment which involves repair or maintenance of concrete.

Session	Location	Date
2001-1	Vicksburg, MS	4/9/2001 4/13/2001
2001-2	Vicksburg, MS	5/14/2001 5/18/2001

## CONCRETE MATERIALS

**Long Title:** *Concrete Materials*

**023**                      **Length: 600 Hours**                      **35CMT01A**

**Purpose.** This training develops and broadens the expertise of civil engineers in all aspects of advanced concrete materials technology. The program offered is unique in that there are no other individual short courses or seminars available which offer this extent of graduate training. The long-range objective is to provide



continuity of an effective knowledge of concrete technology in each USACE command.

**Description.** Graduate school classroom instruction, seminars, and field trips cover the following: properties and production of concrete; advanced concrete and aggregates; special cement and concrete; and at least one other course which complements concrete materials to provide a minimum of 12 credit hours\* which is a typical one semester graduate school workload.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: Selected 0800; (b) Grade: GS-07 or above. Nominees must have a bachelors degree in civil engineering or a related discipline.

\*Up to 15 semester hours of college credit (graduate level) may be obtained.

This course is offered through the graduate program in the Civil Engineering Materials Area at Purdue University. If you are interested in applying, please contact Professor Menashi Cohen directly, Professor of Civil Engineering, Purdue University, telephone number 765-494-5018, e-mail: mcohen@ecn.purdue.edu.

### CONCRETE TECHNOLOGY

**Long Title:** *Concrete Engineering Technology*

**022**                      **Length: 36 Hours**                      **35CET01A**  
**CEUs: 2.5**    **Tuition: \$1,750.00**

**Purpose.** This course relates to the participant's responsibilities in design, construction, and evaluation of structures and preparation of specifications dealing with concrete and related products.

**Description.** Through lecture and conference sessions, this course covers design considerations (material investigations, thermal properties, specialized techniques, grouting, shotcrete, roller-compacted concrete, and high strength specialized applications); preparation of concrete materials design memorandum; construction (qualities of concrete, approval of materials, quality control, quality assurance, and acceptance); evaluation and maintenance of existing structure condition survey, nondestructive testing, instrumentation, cavitation resistance, fibrous concrete, and new materials. Time is allotted for consultation with instructors. Students should come to the course prepared to present an actual concrete materials problem they have encountered and which they believe may be of interest to their fellow students. Slide and overhead projectors, VCR and large screen TV, and other audio/visual aids are available in the classroom for students to use as needed in making their presentations.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: Selected 0802, 0809, and 0810; (b) Grade: GS-09 or above; (c) Other: Students should have a current or projected assignment as design or construction engineers or senior technicians related to

concrete materials.

Session	Location	Date
2001-1	Vicksburg, MS	4/23/2001 4/27/2001

### CONFL MGMT & DISP RES

**Long Title:** *Negotiating, Conflict Management, and Dispute Resolution*

**306**                      **Length: 36 Hours**                      **15NBD01A**  
**CEUs: 0.0**    **Tuition: \$2,040.00**

**Purpose.** This course is designed to convey the knowledge and hands-on experience which makes dispute prevention and resolution a part of each Corps of Engineers manager's tool kit for effective decision-making. The skills developed in this course are applicable to every aspect of the work of the Corps. Accordingly, managers from all disciplines within the Corps will find the insights gained in this course helpful in carrying out their responsibilities. The course enables managers to address the types of conflict encountered in project management, regulatory functions, negotiating local cooperative agreements, managing operations and finances, base closure, and in the Superfund/DERP responsibilities of the Corps. Course participants learn about the variety of Alternative Dispute Resolution (ADR) techniques and how to head off potential disputes or mitigate conflicts when they occur. This course is relevant to managers in all divisions within Major Subordinate Commands including, but not limited to, operations, construction operations, planning, engineering, personnel, real estate, resource management, and equal employment opportunity.

**Description.** Topics covered are (a) overview of major conflict situations across Corps programs; (b) how to identify the types of and reasons for disputes; (c) assessing the point in the "Life Cycle of Conflict" most beneficial for intervention; (d) a continuum of Alternative Dispute Resolution (ADR) techniques; (e) use of third parties in Dispute Resolution; (f) how to create "win-win" outcomes; (g) how and when to use Alternative Dispute Resolution (ADR) techniques; (h) planning to avoid and/or decrease litigation costs; (i) understanding the negotiator mediator, conciliator, and facilitator roles; (j) strategies of coalition building; (k) how to reach consensus; (l) what are negotiation and bargaining? what are the differences between positional and interest-based negotiations and when should they be used?; (m) fact-finding skills; (n) dealing with values; and (o) using communication skills of active listening and applying group process techniques to managing disputes.

**Prerequisites.** Nominees must: (a) be Corps Managers: Executive, Middle Management, and Project Managers; (b) have more than 4 years of Corps or other professional level work experience.

Session	Location	Date
2001-1	Jacksonville, FL	4/23/2001 4/27/2001
2001-2	Denver, CO	6/4/2001 6/8/2001



## CONFL PREV/MGT/ADR

### *Long Title: Conflict Prevention, Conflict Management, and Alternative Dispute Resolution (ADR)*

**384**                      **Length: 16 Hours**                      **15SAP01A**

**Purpose.** Conflicts, disputes, and litigation can reduce the Corp's effectiveness in accomplishing its mission. Students are taught alternative dispute resolution procedures which offer options for the efficient and effective management of disputes. The course focuses on diagnosing disputes, designing management approaches, and selecting and applying techniques to the management of disputes. The course familiarizes management with a range of techniques and how to apply them across all areas of Corps of Engineers missions such as: environmental engineering, construction, engineering, regulatory, planning civil works and support to the Army, and others.

**Description.** This course includes topics on (a) techniques of interest-based negotiation/bargaining; (b) conflict analysis and diagnosing disputes; (c) assisted negotiation strategies; (d) the continuum of ADR techniques; (e) principles of durable settlements; (f) estimating best alternatives to negotiated agreements; (g) management thought processes for applying ADR techniques; (h) single text negotiations; (i) ADR principles for managers; and (j) partnering.

**Prerequisites.** Nominees must be assigned as commanders, senior executives, senior managers, and resident and area engineers with significant contracting responsibilities in all the Corps' principle areas of activity including, but not limited to, construction and operations, regulatory, area/resident engineers, procurement (contracting), planning, engineering, personnel, real estate, resource management, and legal counsel. Nominees must be assigned Grade: GS-13 through GS-15, and military personnel in grades 04 and above.

## CONFLICT ANALYSRES

### *Long Title: Conflict Analysis in Reservoir Management*

**109**                      **Length: 36 Hours**                      **46CAN01A**

**Purpose.** The primary objective of the course is to provide participants with the capability to formulate and evaluate alternative reservoir operation and management plans as part of reservoir system management conflicts studies seeking solutions to storage and release decisions.

**Description.** Analytical methods, and tools for formulating and evaluating alternative operation and management plans of single and multiple reservoir systems for conflict resolution studies, are covered along with techniques for communication of study and evaluation results to affected parties.

The suite of tools presented will include both simulation and optimization computer programs that enable analysis of the hydrologic system and assessments of the resulting operations for a range of multiple purposes including: flood control, fish and wildlife, water quality, navigation, hydroelectric power, water supply, and recreation. Strategies for conducting the analytical studies and interpreting and communicating the results within a multidisciplinary framework that integrates the various interest group's perspectives are also covered.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: Selected 800 and 400 series, 028, 819, 184, 101, 401, and 1301; (b) Grade GS-09 and above. Nominees should be water control managers, hydrologists, hydraulic engineers, environmentalists/biologists, economists, sociologists, or study managers. Nominees should be presently or will near-term be actively engaged in some form of Corps conflict resolution study involving reservoir system operations.

## CONST CONT ADMIN

### *Long Title: Construction Contract Administration*

**366**                      **Length: 36 Hours**                      **41CCA01A**  
**CEUs: 2.5**                      **Tuition: \$810.00**

**Purpose.** This course provides a basic review of the DOD acquisition process as it relates to construction contract administration and field administration of fixed-price construction contracts. As an introductory course, it also serves as a developmental link between the construction and engineering career ladders.

**Description.** This course covers the typical construction contract administration procedures and responsibilities required to administer a fixed-price construction contract. The student is provided with the basic tenants of the FAR acquisition process and a detailed review of the construction management functions in a typical field office. The course provides a basic understanding of fixed-price construction contracts, important operative FAR, DFARS, AFARS, and EFARS clauses, legal considerations, and administrative requirements of government contracting. A series of lectures, problem-solving cases, and exercises are presented to highlight the important contractual and procedural issues encountered during the construction contract administration process.

**Prerequisites.** Nominees should be assigned (a) Occupational Series: Selected 0340, 0800, 0905, 1100; (b) Grade: GS-05 to GS-13; (c) Experience: 0-3 years in the construction function; (d) Responsibilities: personnel should be actively engaged in the field administration of fixed-price construction contracts; this course is also for those other series actively and directly involved in the construction contracting process; (e) Knowledge/Skills: nominee should possess a general knowledge of the post-award construction contract process.



<u>Session</u>	<u>Location</u>	<u>Date</u>
2001-1	Huntsville, AL	10/23/2000 10/27/2000
2001-2	San Francisco, CA	1/29/2001 2/2/2001
2001-3	San Antonio, TX	3/12/2001 3/16/2001
2001-4	Huntsville, AL	5/7/2001 5/11/2001
2001-5	Phoenix, AZ	6/25/2001 6/29/2001

## CONST QUALITY MGT

**Long Title: Construction Quality Management**

**029**                      **Length: 20 Hours**                      **35CQM01A**  
**CEUs: 1.5**                      **Tuition: \$470.00**

**Purpose.** This course is designed to be the primary introduction to the Construction Quality Management System as practiced in the Corps of Engineers. The targeted audience is all persons involved in the surveillance of construction contracts.

**Description.** After completing this course, the student will understand the objective of construction quality management related to establishing quality requirements, controlling quality during construction, and taking necessary measures to assure quality.

Through lecture and guided discussion sessions, this course covers a background of the system, inclusion of quality in documents, responsibilities of the contractor and the government under this system, implementation, and enforcement. Case studies are used to the maximum with emphasis on student participation.

The course utilizes ER 1180-1-6, Construction Quality Management; ER 415-1-10, Contractor Submittal Procedures (Shop Drawings and Materials); ER 415-1-11, Biddability, Constructibility, Operability, and Environmental Review; and ER 415-1-302, Inspection and Work Records.

**Prerequisites.** Nominees must be assigned (a) Occupational series: 0800; (b) Grade: GS-05 or above; (c) Other: Students should have a current or projected assignment as a member of the resident or area engineer's staff whose day-to-day function entails construction contract surveillance and contract administration. Specification writers and designers who establish the quality to be incorporated in the contract documents are eligible for attendance.

**Notes.** This course is also available in exportable format. Refer to Section 3.

<u>Session</u>	<u>Location</u>	<u>Date</u>	
2001-1	St Louis, MO	12/4/2000	12/6/2000
2001-2	St Louis, MO	12/6/2000	12/8/2000
2001-3	Huntsville, AL	4/2/2001	4/4/2001
2001-4	Huntsville, AL	4/4/2001	4/6/2001

## CONST WET HAB MITI (SEM)

**Long Title: *Constructed Wetlands for Habitat Mitigation Seminar***

**439**                      **Length: 36 Hours**                      **33CWH01A**  
**CEUs: 0.0**                      **Tuition: \$1,880.00**

**Purpose.** To identify a “Blue Print” for initiating, developing, engineering, planning, constructing, acquiring (real estate), operating and marketing presently authorized or future large-scale wetland ecosystem level projects which are consistent with both Corps and local sponsor needs.

**Description.** New Congressional authorities and regulations require the Corps to mitigate adverse project impacts on habitats including fish and wildlife. Several large-scale wetland ecosystem restoration and development projects for mitigation or improvement of the environment in Louisiana, Washington, Florida, California and Arizona have been approved and are in review, or are in the construction phase. This course introduces and overviews the engineering accomplishments and opportunities of these projects which involve many Corps business practices. The critical role of involving local cost sharing sponsors and marketing strategies to link Corps expertise with problem solutions to meet multi-agency needs are examined. An overview of wetland vegetation, wetland hydrology, wetland soils, monitoring, and costs is provided to present the framework for a “blueprint” for marketing and engineering future large-scale wetland ecosystem projects which are consistent with existing authorities. Highly facilitated panel and field problem solving sessions will be conducted.

**Prerequisites.** Planning, engineering, real estate, regulatory, construction, policy, natural resources, and legal counsel (GS-09 through GS-14).

<u>Session</u>	<u>Location</u>	<u>Date</u>
2001-1	Olympia, WA	7/30/2001 8/3/2001

## CONSTRUCTION SAFETY

**Long Title: Construction Safety**

**215**                  **Length: 24 Hours**                  **58COS01A**  
**CEUs: 0.0**                                      **Tuition: \$570.00**

**Purpose.** This course is designed for field personnel that have construction safety and health responsibilities. Course provides information relative to the Corps Safety and Health Requirements Manual, EM 385-1-1 and pertinent Occupational Safety and Health Administration (OSHA) construction standards.

**Description.** This course will cover through lectures, discussions, practical exercises, and case studies, the major aspects of the Corps of Engineers construction safety and health program. Using extensive con-



struction safety backgrounds, instructor staff will discuss and examine prudent application of EM 385-1-1 to construction field settings and problem areas. Safety topics covered during these sessions will include the following: (a) construction safety mgmt; (b) trenching and excavation; (c) rigging and mechanized equip; (d) fall protection; (e) scaffolding and access; (f) occupational health rqmnts; (g) confined space entry; (h) hand and power tools; (i) temporary electrical service; (j) control of hazardous energy; (k) activity hazard analyses; (l) contractor safety submittals; (m) welding and cutting; (n) QA/QC - safety relationship; (o) contractual safety rqmnts; and (p) Corps/OSHA relationships. Participants will gain an overall understanding of the various elements that comprise a successful construction safety program and be provided current state-of-art safety technology and methodology as it relates to the Corps of Engineers.

**Prerequisites.** Attendance is open to all Department of Defense and other Federal agency employees who have a need for construction safety and health information or responsibility for enforcing contractual safety requirements. It is recommended that field construction personnel repeat attendance to this course on a three-five year cycle.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2001-1	Jacksonville, FL	12/5/2000 12/7/2000
2001-2	Albuquerque, NM	4/3/2001 4/5/2001

## CORROSION CONTROL

**Long Title: Corrosion Control**

**009**                      **Length: 36 Hours**                      **35CCL01A**  
**CEUs: 0.0**    **Tuition: \$1,450.00**

**Purpose.** This course familiarizes design engineers and engineers involved with project operations such as structural, mechanical, electrical, etc., with the mechanism of corrosion, the results if unchecked, and the methods of its mitigation. Designers, if familiar with corrosion phenomena, can temper their designs so as to avoid potential problems or make it easier to provide protection.

**Description.** Topics included in this course are: fundamentals of corrosion and engineering alloys; principles of cathodic protection and electrode potentials; design of cathodic protection systems; design considerations; atmospheric corrosion; design for underground cathodic protection systems; types of corrosion; painting practices; sea water corrosion; system test and evaluation; and materials selection. After discussions of fundamentals, course will divide into sections for military programs and civil works applications.

**Prerequisites.** Nominees must be assigned (a) Occupational series: selected 0800; (b) Grade: GS-09 or above; (c) Other: students should be designers or supervisory engineers.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2001-1	Champaign, IL	1/29/2001 2/2/2001

## COST EST BASICS

**Long Title: Cost Estimating Basics**

**181**                      **Length: 36 Hours**                      **35CEB01A**  
**CEUs: 0.0**    **Tuition: \$950.00**

**Purpose.** This course provides training on basic cost estimating principles and fundamentals. The training is intended for individuals who are entering the Cost Engineering profession with little or no cost estimating experience or who will be responsible for the review or preparation of detail cost estimates for Military Programs, Civil Works, HTRW, and other projects as required.

**Description.** This is a non-computer based basic course designed to teach individuals cost estimate preparation, and the identification and classification of costs associated with the construction of projects. Through the use of lectures, visual aids, and individual and group practical exercises, the course provides instruction on: (a) an overview of procurement and cost engineering regulations; (b) work breakdown structures; (c) reading construction drawings; (d) quantity calculation and development; (e) performing manual quantity takeoffs; (f) determining labor costs, and crew composition; (g) estimating costs of equipment, material, and supplies; (h) developing indirect costs; (i) determining cost escalation and contingencies; and (j) estimates summaries.

**Prerequisites.** Nominees must be assigned (a) Occupational series: selected 0800; (b) Grade: GS-05 through GS-09; (c) Other: nominees must obtain CEMP-EE or CECW-EC approval before attending this course. A pocket calculator is required for this class.

**Notes.** This course has a precourse assignment. The student should bring their completed precourse assignment with them to the course. This course contains requirements which are mandatory for course completion and may require an estimated 8 hours of overtime. It is the student's responsibility to certify the amount of time expended on these requirements to the supervisor when overtime compensation is requested.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2001-1	Huntsville, AL	3/26/2001 3/30/2001
2001-2	Huntsville, AL	6/4/2001 6/8/2001

## COST-REIMBURSE CONTR

**Long Title: Management of Cost - Reimbursement (Construction, A-E & HTRW) Contracts**

**001**                      **Length: 36 Hours**                      **41CRC01A**  
**CEUs: 2.5**    **Tuition: \$840.00**

**Purpose.** This course provides practical guidance on how to structure, solicit, and manage cost-reimburse-



ment contracts. The course is suitable for all functional elements, but is primarily geared to the Corps construction execution workforce. The course directly supports the Corps vision by addressing many contemporary issues regarding the management of innovative contracts and supports the "Best Value" selection process.

**Description.** This course covers the acquisition strategy, source selection, and management of cost-reimbursement contracts. The instruction and text material addresses solicitation preparation to final closeout of cost-reimbursement contracts. Specific subjects addressed include the history of cost-reimbursement contracts, acquisition policies, selection of contract type, preparation of the request for proposal, source selection procedures, cost accounting, procurement and property management, Work Authorization Document (WAD) and Earned Value Systems for cost control, fee and profit policies, Corps organization and management, contractors organization, and final closeout.

**Prerequisites.** Nominees should be assigned (a) Occupational Series: 0028, 0340, 0560, 0800, 0905, and 1100; (b) Grade: GS-11 or above; Military—Captain or above; (c) Responsibilities: personnel should be assigned or actively engaged in the administration of a current or future cost-reimbursement contract or to a start-up team for a cost-reimbursement contract; (d) Knowledge/skills: nominee should possess a general knowledge of contracting procedures and construction contract administration; (e) Prerequisite training: nominee should have completed the basic Construction Contract Administration course (No. 366).

<u>Session</u>	<u>Location</u>	<u>Date</u>	
2001-1	Huntsville,, AL	1/22/2001	1/26/2001
2001-2	Tulsa,, OK	6/11/2001	6/15/2001

## CRANE SAFETY

**Long Title: Crane Safety**

**032**                  Length: 32 Hours                  58CNS01A  
CEUs: 0.0                  Tuition: \$950.00

**Purpose.** This course provides students with a fundamental understanding and knowledge of the safe operation of the various types of cranes and lifting devices used within the Corps of Engineers. Inspection, maintenance and operational requirements for cranes and lifting devices will also be covered in this 4 day course.

**Description.** Areas to be covered in this course include the following topics: (a) types of cranes; (b) design and construction of cranes; (c) wire ropes and sheaves; (d) crane and hoist signals; (e) selecting and training operators; (f) inspection of lifting equipment; (g) safety rules for cranes; (h) barge mounted cranes; (i) draglines and piledrivers; (j) ANSI and consensus standards; and (k) EM 385-1-1 requirements.

**Prerequisites.** Nominee must be assigned to field activities and require an indepth knowledge of cranes and lifting devices. All grade levels are accepted. Course is specifically recommended for Corps of Engineers heavy equipment operators, i.e., crane, dragline, pile-driver, etc.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2001-1	Huntsville, AL	10/17/2000 10/20/2000
2001-2	Huntsville, AL	3/6/2001 3/9/2001
2001-3	Huntsville, AL	3/12/2001 3/15/2001
2001-4	Huntsville, AL	4/17/2001 4/20/2001

## CULTURAL RESOURCES

**Long Title: Cultural Resources: Identification, Analysis, and Evaluation**

**299**                  Length: 36 Hours                  33CUR01A  
CEUs: 0.0                                      Tuition: \$920.00

**Purpose.** This course provides students with a broad-based understanding of the character and quality of cultural resources as well as a working knowledge of the identification and assessment procedures applied to those resources affected by a proposed undertaking. The course is designed for planners, environmental resources managers, student managers, project managers, and others who will participate in the assessment and management of cultural resources.

**Description.** The attributes, quality, and values of cultural resources are examined with the processes of identification, evaluation, and impact assessment described in detail. Students receive an overview of Corps planning principles and guidelines focusing on the integration of cultural resource considerations with other resource planning and management activities. Attention is given to provisions of the National Historic Preservation Act (NHPA) of 1966, the Archeological Resources Protection Act of 1979, the Native American Graves Protection and Repatriation Act and other legislative and regulatory requirements. This course gives special consideration to the procedural requirements of Section 106 of the NHPA and the interrelationships of the agency, the Advisory Council on Historic Preservation, the State Historic Preservation Office, and officials of Indian tribes. The program also offers an overview of the nature of Corps relations with Indian tribes including an understanding of the Trust relationship, government-to-government relations, treatment of Native American human remains and associated objects and Indian access to sacred sites. State-of-the-art field techniques, methodologies regional overviews, and data management are illustrated.

**Prerequisites.** Nominees must be assigned (a) Occupational series: selected 0020, 0100, 0400, 0800 and 1300; (b) Grade: GS-07 or above (water resource planners, rangers, park managers, planners, study managers, designers - anyone potentially involved with cultural resources during the planning, design, or operation of a project). Nominees should have at-



tended the Environmental Impact Assessment course and the Planner Orientation course, or equivalents.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2001-1	Santa Fe, NM	5/14/2001 5/18/2001
2001-2	Santa Fe, NM	5/21/2001 5/25/2001
2001-3	Santa Fe, NM	6/4/2001 6/8/2001

#### NEW

### CUSTOMER OUTREACH EXECUTIVES

**Long Title:** *Customer Outreach Executives*

**446**                      **Length: 4 Hours**                      **15COE01A**

**Purpose.** This workshop provides an executive overview of the Customer Outreach Cycle: strategic outreach planning, account planning, implementation, and evaluation. Current USACE outreach initiatives are summarized.

**Description.** This workshop provides the Big Picture overview of outreach concepts and an introduction to the basic concepts of the outreach cycle. The objective of the workshop is to expose USACE leadership and management to the benefits of developing long-term business relationships with customers. The workshop is designed for onsite presentation at districts and division locations. For more information about an onsite session, please contact Joy Rodriguez, (256) 895-7448.

**Prerequisites.** This workshop is of value to USACE leadership and upper management. It is suggested that attendees preview the Outreach Tutorial located at [www.usace.army.mil/essc/intra/customer/cotutor](http://www.usace.army.mil/essc/intra/customer/cotutor).

<u>Session</u>	<u>Location</u>	<u>Date</u>
2001-1	DATES AND LOCATION TBD	

### CUSTOMER OUTREACH WKSHP

**Long Title:** *Customer Outreach Workshop*

**442**                      **Length: 16 Hours**                      **15COW01A**

**Purpose.** This workshop gives Corps personnel an introduction to business development practices. The workshop provides insight into the use of customer outreach applicable to all mission areas throughout the Corps. The key objectives include strategic outreach planning, customer account development, developing written plans, customer contact skills, and evaluation of the total customer outreach process. Current USACE outreach initiatives are summarized.

**Description.** The course provides an overview of outreach concepts and an introduction to specific marketing tools and techniques via classroom exercises. These concepts include strategic planning to identify district/division business development goals, customer account planning tools and customer-focused presentation and contact skills. The workshop is designed for onsite presentation at district and division locations.

For more information about an on site session, please contact Joy Rodriguez at (256) 895-7448.

**Prerequisites.** Nominees may be assigned to any occupational series at Grade Level GS-09 and above. This workshop is of value to all Corps personnel engaged in outreach and business development with external customers. All students should preview the Outreach Tutorial located at [www.usace.army.mil/essc/intra/customer/cotutor](http://www.usace.army.mil/essc/intra/customer/cotutor).

<u>Session</u>	<u>Location</u>	<u>Date</u>
2001-1	DATES AND LOCATION TBD	

### CW PROGRAM DEVEL(SEMINAR)

**Long Title:** *Civil Works Program Development and Execution*

**010**                      **Length: 28 Hours**                      **46CWP01A**  
**CEUs: 0.0**                      **Tuition: \$650.00**

**Purpose.** This seminar is designed primarily for civil works program managers, project managers, and functional mission supervisors. It provides a comprehensive understanding of civil works mission accomplishment, programming concepts and activities, and the importance of the project development team concept in program execution.

**Description.** The seminar includes discussions of: (1) the Corps of Engineers, administration, and congressional committee organizations relative to the civil works program, program authorizations, and appropriations; (2) program development, including new start and continuing programs, and capabilities; (3) program defense, including OMB and congressional hearings; and (4) program execution, including work allowances, reprogramming actions, performance measurement, and manpower allocations.

**Prerequisites.** Nominees must be assigned to an Occupational Series in CP 18 or CP 11, and meet the criteria below:

Categories of Eligibility: *Category 1.* Civil works programmers and project managers, GS-09 and above, in programs and project management organizations. *Category 2.* Civil works supervisors managing mainline functional mission subprograms (planning, engineering, construction, operations, and their key branches), GS-13 and above, including equivalent military personnel, who desire a better understanding of the total civil works program and mission accomplishment. *Category 3.* Chiefs of Real Estate, Chiefs of Resource Management, Chief Counsels, and Budget Officers. *Category 4.* Professional civil works supervisors or managers, GS-12 and above, in planning, engineering, construction, or operations who assist category 2 supervisors in managing their subprograms. *Category 5.* Civil works managers, GS-09 and above, in planning, engineering, construction, or operations. SPECIAL CATEGORY: Division and district







business with the Corps of Engineers on the latest developments, lessons learned and use of Design-Build as a construction method.

**Description.** Topics include: (a) Design-Build Overview; (b) Planning the Acquisition; (c) Developing the technical requirements; (d) Clauses and special contract requirements; (e) Proposal submission requirements; (f) Proposal evaluation criteria; (g) Instructions to offerors; (h) Preparing source selection plans; (i) Issuing RFP/receiving proposals; (j) Evaluating proposals; (k) Awarding the contract; and (l) Contract management.

**Prerequisites.** Nominees should be individuals involved in Design-Build contracting, including: Engineering, Construction, Contracting, Counsel, Project Management, and Customers.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2001-1	Huntsville, AL	10/30/2000 11/3/2000
2001-2	San Diego, CA	2/26/2001 3/2/2001
2001-3	Virginia Beach, VA	4/23/2001 4/27/2001

### DIESEL GENERATORS

**Long Title:** *Diesel Generators - Familiarization and Testing*

**106**                      **Length: 36 Hours**                      **54DGN01A**  
**CEUs: 0.0**    **Tuition: \$1,610.00**

**Purpose.** This course provides a general familiarization with the components and systems that make up a diesel generator, and teaches the proper testing and checkout procedures to be followed prior to accepting generating units from the construction contractor.

**Description.** Through lectures, visual aids, and demonstration sessions, this course covers such subjects as engine and generator basics, fuel systems, heat transfer systems, generator exciters and regulators, governors, instrumentation, design criteria, various factory and field test procedures, automatic transfer switches, and typical installation problems. A portion of this course will be conducted utilizing a diesel generator unit to perform some typical field tests.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: 0802, 0809, 0810, 0830, and 0850; (b) Grade: GS-09 or above. The broad content of the course is beneficial for technically-oriented construction, design, and maintenance personnel. Nominees should have a current or projected assignment as an electrical or mechanical technician or general inspector with electrical and mechanical inspection responsibilities. Recommend that nominees complete the Electrical, Mechanical, or General Inspection Courses prior to taking this course. Engineers are exempt from this prerequisite requirement.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2001-1	Denver, CO	6/11/2001 6/15/2001

### DIST OFCR INTRO

**Long Title:** *District Officer Introductory Course*

**334**                      **Length: 68 Hours**                      **41DOI01A**  
**CEUs: 6.7**    **Tuition: \$3,280.00**

**Purpose.** This course is designed to orient the newly assigned engineering officer who is an engineer by training but has done little or no business in the USACE environment. The course provides a broad overview of the organization and covers a wide range of topics relating to all facets of the Corps of Engineer's mission.

**Description.** Course is structured to take students through all phases of military and civil works projects. Specific topic areas include programming, budget design, project management, acquisition, planning, contracting, construction contract management, legal considerations, and environmental issues. Case studies and practical exercises are utilized to enhance the student's understanding of specific subject matter in selected areas of the course. The course is designed to familiarize the student with the field operating environment.

**Prerequisites.** Nominees will be nominated by HQDA (Engineer Branch), the Military Personnel Division (CEHR-M) of HQUSACE, division and district commanders, and laboratory directors. Nominees should be (a) Occupational branch series: 21; (b) Paygrades: 02, 03, or 04; (c) newly assigned officers who will be assigned duties within the USACE environment in the Area of Concentration (AOC) 21D; (d) newly assigned civilian personnel GS-12 and above.

**Notes.** RELATED INFORMATION. No quotas are allocated from the Annual Training Needs Survey because course attendees are nominated and approved by commanders and directors in the command structure. Nominees are notified of course attendance within 60 days of the start date. Even though nominees are being directed to attend this course as outlined in ER 350-3-5, funding is accomplished through the tuition method. Corps organizations will be billed in accordance with Corps standard operating procedures.

NOTE: This training is part of the approved training for Engineering Officers. Course attendance is recorded in the official personnel files (ORB).

<u>Session</u>	<u>Location</u>	<u>Date</u>
2001-1	Huntsville, AL	4/2/2001 4/12/2001

### DIVING INSPECTOR

**Long Title:** *Diving Inspector*

**397**                      **Length: 40 Hours**                      **33DIS01A**  
**CEUs: 0.0**    **Tuition: \$1,890.00**

**Purpose.** This course provides Corps of Engineers employees who have quality assurance, safety, and/or







**Prerequisites.** Attendees should have a general knowledge of the facilities engineer work management system, and training in the use of one or more IFS modules.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2001-1	Huntsville, AL	2/8/2001 2/9/2001

### DPW BUDGET/JCA

**Long Title:** *DPW Budget/Job Cost Accounting Course*

**981**                      **Length: 32 Hours**                      **42DBF01A**  
**CEUs: 0.0**    **Tuition: \$625.00**

**Purpose.** This course is for Directorate of Public Works (DPW) budget chiefs, budget analysts and budget assistants or Directorate of Resource Management (DRM) Branch chiefs, engineering team leaders, budget analysts, budget assistants, and other personnel responsible for the financial management of installation Real Property Maintenance Activity (RPMA) resources at Army installations or communities. The course provides a concentrated look at the Integrated Facilities System (IFS) Job Cost Accounting (JCA) module's role as a tool to manage the financial aspects of work accomplished by the DPW. The scope of the presentation includes both RPMA resources interfaced to the installations financial management system and project work maintained internal to IFS only.

**Description.** Through lectures, individual study and class exercises, this class teaches students how to enter cost data into IFS, how obligations and expenses are related to engineer work documents in the system, and how costs/hours/EOR information are passed to other accounting systems. Students will learn those IFS tables which effect the Job Cost function, those tables which must be built with unique installation data, and how to set up those tables for the proper functioning of the IFS Job Cost function. Also covered are the interactions between Job Cost Accounting and other IFS modules, and the set-up and operation of the Utility Billing sub-module contained within the JCA module of IFS.

**Prerequisites.** It is recommended that nominees should be in a current or projected assignment involving DPW financial and budget management.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2001-1	Huntsville, AL	7/24/2001 7/27/2001
2001-2	Huntsville, AL	7/30/2001 8/2/2001

### DPW CONTR ADMIN

**Long Title:** *DPW Support Services Contract Administration*

**330**                      **Length: 36 Hours**                      **41CTA01A**  
**CEUs: 0.0**    **Tuition: \$1,330.00**

**Purpose.** This course provides training in administration of service contracts for installation level Directorate

of Public Works (DPW) personnel.

**Description.** This course provides the student with an understanding of the purpose and objectives of the DPW contract administration process. Through lectures and group discussions, topics include: develop of a Performance Work Statement (PWS) and Quality Assurance Surveillance Plan (QASP); develop of a Contractor Quality Control Program; surveillance of contractor performance; performance payment analysis; and contracting lessons learned for services contracted.

**Prerequisites.** Nominees should be installation level personnel who are assigned as contracting officer representatives, quality assurance evaluators or supervisors, or assigned in other full time contract administration positions for DPW contracts.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2001-1	Huntsville, AL	7/9/2001 7/13/2001

### DPW ENGRD PERFORMANCE STD

**Long Title:** *DPW Engineered Performance Standards Course*

**987**                      **Length: 40 Hours**                      **54DPS01A**  
**CEUs: 0.0**    **Tuition: \$450.00**

**Purpose.** This course teaches students to properly apply Engineered Performance Standards (EPS) in estimating maintenance and repair work within the Directorate of Public Works (DPW) organization at Army installations and communities.

**Description.** The EPS standards and their application are the basis for the development of the Facilities Engineering Job Estimating system (FEJE) and IFS Work Estimating automated estimates. The principles learned here enable the estimator to develop manual estimates using the hard copy craft handbooks and provide the estimator with an in-depth understanding of EPS is applied in an electronic estimating environment.

**Prerequisites.** It is recommended that nominees be personnel involved in Real Property maintenance. The prior completion of IFS Supply Computer Based Instruction is strongly recommended.

### DPW FUNCTIONAL MANAGEMENT

**Long Title:** *DPW Functional Management Course*

**999**                      **Length: 36 Hours**                      **15DMF01A**  
**CEUs: 0.0**    **Tuition: \$750.00**

**Purpose.** This course provides students with an insight into the functional relationships between O&M, ERM, EP&S and other Directorate of Public Works (DPW) key personnel and those with other Army installation organizations.



**Description.** Through lectures and an intensive practical exercise, the course centers around the ERM, O&M and EP&S Divisions' requirements to direct, coordinate and control DPW operations, specifically master planning, resource management and execution of the work of master planning, an annual work plan, and the execution of the work on Fort Excellence. The principles of the Army's Performance Improvement Criteria and process modeling are employed as the groups are tasked with improving the plans for Fort Excellence. The course uses lecture, small group instruction, and practical exercises to reinforce the objectives.

**Prerequisites.** It is recommended that nominees should be Branch Chiefs within their Army installation or Corps of Engineers organization, or personnel identified with a potential for a Branch Chief position within the next year.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2001-1	Huntsville, AL	4/9/2001 4/13/2001
2001-2	Huntsville, AL	7/9/2001 7/13/2001

### DPW JOC ADVANCED

**Long Title:** *DPW Job Order Contracting, Advanced Course*

**991**                      **Length: 24 Hours**                      **41DJA01A**  
**CEUs: 0.0**    **Tuition: \$625.00**

**Purpose.** This course teaches students strategies and procedures for technical discussion and negotiation with contractors in the JOC task order process. JOC is most applicable to the Directorate of Public Works (DPW) organization on an Army installation or community.

**Description.** Through lectures and a contract negotiation workshop, this course covers preparation for negotiation, conduct of negotiation sessions, alternatives, and documentation. It also provides students with an understanding of the overall process of contract changes, modifications, and claims and prepares individuals to perform their roles in this contract actions applied to JOC.

**Prerequisites.** It is recommended that nominees be Army installation DPW or supporting contracting office personnel that are, or expect to be, performing as JOC project managers, ordering officers, or contract administration personnel. Contractor personnel are not eligible to attend. Nominees must have completed the JOC Basic Course.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2001-1	Huntsville, AL	12/4/2000 12/6/2000
2001-2	Huntsville, AL	5/7/2001 5/9/2001

### DPW JOC BASIC

**Long Title:** *DPW Job Order Contracting, Basic Course*

**990**                      **Length: 32 Hours**                      **41DJB01A**  
**CEUs: 0.0**    **Tuition: \$625.00**

**Purpose.** This course teaches students the basic policies, and procedures for properly executing real property repair, and minor construction using a Job Order Contracting (JOC) contract applicable to the Directorate of Public Works organization on an Army installation or community.

**Description.** The course covers the elements of JOC; delivery order scoping; delivery order proposal requesting, receiving, reviewing, evaluation, negotiation, and documentation; delivery order placement by ordering officers; key JOC management issues; contract administration procedures under JOC; and automated data processing (ADP) programs to assist JOC management. The underlying themes through all the modules of the course emphasize cooperative working agreement between contractor and government; efficient and timely processing and completion of projects; and adherence to proper contract administration procedures.

**Prerequisites.** The nominees for this course may include any DPW personnel. However, the course is specifically oriented for personnel assigned or about to be assigned duties in the JOC activity within the DPW, and personnel of the supporting contracting office that will be involved in JOC contract administration.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2001-1	Huntsville, AL	11/28/2000 12/1/2000
2001-2	Huntsville, AL	5/1/2001 5/4/2001

### DPW PBC I

**Long Title:** *DPW Performance-Based Contracting (PBC) - Pre-Award Training Course*

**979**                      **Length: 36 Hours**                      **41DBP01A**  
**CEUs: 0.0**    **Tuition: \$610.00**

**Purpose.** This course is for supervisors, technical and project managers, contracting officers, contracts specialists, and technical personnel responsible for identifying requirements or preparing solicitation documents for service contracts including those prepared as part of an Office of Management and Budget (OMB) Circular A76 Cost Study. This course addresses the regulatory requirements, policies and procedures governing the performance-based contracting (PBC) methodology.

**Description.** Through lectures, individual study, and work group activities, this course provides a detailed description of the PBC methodology. Unique PBC terms and definitions are presented and the structure of the contract is demonstrated through the use of







<u>Session</u>	<u>Location</u>	<u>Date</u>
2001-1	Huntsville, AL	3/6/2001 3/8/2001

## DPW PWBOC

**Long Title: DPW Basic Orientation Course**

**988**                      **Length: 36 Hours**                      **54DBO01A**  
**CEUs: 0.0**                      **Tuition: \$625.00**

**Purpose.** This course provides students with an overview of the Army Installation Management Concepts and organization and missions, and Directorate of Public Works (DPW) operations.

**Description.** The course covers the Real Property requirements planning, acquisition planning, financial and work management systems, and operational evaluation procedures, organization, function, and mission of the DPW, and how to integrate real property maintenance activities. Classroom instructions includes lectures, and practical exercises.

**Prerequisites.** It is recommended that nominees be Department of the Army personnel.

<u>Session</u>	<u>Location</u>	<u>Date</u>	
2001-1	Huntsville, AL	7/16/2001	7/20/2001
2001-1	Huntsville, AL	1/22/2001	1/26/2001

## DPW PWMOC

**Long Title:** *DPW Management Orientation Course*

**989**                      **Length: 80 Hours**                      **15DM001A**  
**CEUs: 0.0**                      **Tuition: \$1,200.00**

**Purpose.** This course provides an orientation for the new Directorate of Public Works (DPW) manager and key DPW staff personnel..

**Description.** This course covers the administration, organization, functions, and management systems of the installation DPW to include: Operations and Maintenance, Army (OMA) and Army Family Housing (AFH) work classification and approval limits; the DPW financial and work management systems; the DPW resource management and annual work plans; DPW automation; and real property management and master planning. Other topics discussed include: Department of Defense (DOD), Department of the Army (DA) and installation management and organization concepts relative to DPWs; US Army Reserve (USAR) and Non-Appropriated Fund/Morale, Welfare and Recreation (NAF/MWR) programs and projects; contract management system; US Army Corps of Engineers (USACE) installation support; and current Headquarters, Department of the Army (HQDA) environmental, facilities, and housing issues. The classroom instruction includes lectures/seminars presented by experienced guest speakers from HQDA and DPWs; group practical exercises; classroom discussion; individual assignments; and an examination.

**Prerequisites.** It is recommended that nominees should be Active Army and reserve component commissioned officers, CPT through LTC, or senior non-commissioned officers, E7 through E9, that have been recently assigned or projected for an assignment to an installation DPW management position; CPT through COL that are currently in or projected for an assignment to a Major Subordinate Command/Major US Army Command MSC/MACOM DPW- related management position; Department of the Army civilians, GS-09 or above, at installation level, MSC, MACOM, or HQDA; DPW/ District/Division interns GS-05 and above, who are covered by either the Housing management, or Engineer and Scientist career program. All nominees should have less than two years DPW experience.

<u>Session</u>	<u>Location</u>	<u>Date</u>	
2001-2	Ft. Belvoir, VA	4/30/2001	5/11/2001
2001-1	Ft. Belvoir, VA	8/6/2001	8/17/2001

## DPW QA SERVICE CONTRACTS

**Long Title: DPW Quality Assurance for Service Contracts Training Course**

**972**                      **Length: 36 Hours**                      **41DQA01A**  
**CEUs: 0.0**                      **Tuition: \$610.00**

**Purpose.** This course is for Quality Assurance Evaluators (QAE), Contracting Officer Representatives (COR), and other personnel who evaluate contractor's performance.

**Description.** Through lectures, individual study, and work group activities, this course provides training in contract surveillance techniques. Quality assurance definitions, terms and pertinent contract clauses are presented and reinforced using examples and practical exercises. Inspection and acceptance responsibilities are identified and a Quality Assurance Surveillance Plan is presented and discussed. Surveillance methods are explained and practical exercises are used to illustrate the different features of random sampling, planned sampling and 100 percent inspection. The use of validated customer complaints and unscheduled inspections are discussed as supplemental surveillance methods. Applicable portions of ANSI/ASQC Z1.4, Sampling Procedures and Tables for Inspection by Attributes are covered in detail. The manual use of random number tables in an automated method are demonstrated and practiced. Students prepare a government contract quality assurance program using a sample contract as the basis for the work. Various Assurance (QA) Plan attachments such as surveillance activity checklists, inventory of services worksheets, evaluation worksheets, QA tally checklists, and Contracting Officer Representatives/Quality Assurance Evaluators (COR/QAE) surveillance schedules are prepared. Surveillance actions are performed and critiqued in class. Students perform payment analysis and make recommendations for payment deductions and surveillance adjustments.



**Prerequisites.** Nominees should include personnel assigned or to be assigned as COR/QAE and others with contractor performance monitoring duties.

<u>Session</u>	<u>Location</u>	<u>Date</u>	
2001-1	Huntsville, AL	2/26/2001	3/2/2001
2001-2	Huntsville, AL	4/16/2001	4/20/2001

## DPW SUPPLY SQL

**Long Title: DPW Supply (Informix) SQL Applications Course**

**985**                  **Length: 24 Hours**                  **45DSS01A**  
**CEUs: 0.0**                                      **Tuition: \$300.00**

**Purpose.** This course is for Supply Personnel or Systems Administration/Database Administration personnel within the Directorate of Public Works (DPW) at Army installations or communities that need to be able to write Informix Structured Query Language (SQL) queries against the Integrated Facilities System (IFS) Supply Database.

**Description.** Through lectures, individual study and class exercises, this class provides students with an overview of the entire DPW function but deals primarily with the development of Informix SQL queries against the IFS Supply database. The course will demonstrate how to develop queries that extract information from one or more tables, how to use VI editor to edit the queries and how to use report writer to generate formatted reports.

**Prerequisites.** Even though elementary query development techniques will be covered, students will find the course more informative if they have some experience writing at least simple single table queries before starting the course.

## DPW WORK ESTIMATING

**Long Title: DPW Work Estimating Functional Course**

**983**                  **Length: 32 Hours**                  **46DWE01A**  
**CEUs: 0.0**                                      **Tuition: \$625.00**

**Purpose.** This course is for Directorate of Public Works (DPW) Planners and Estimators, Design Engineers, Shop supervisors, schedulers and other personnel responsible for the estimating of work requests at Army installations and communities. The course provides a concentrated look at the IFS Work Estimating function as a tool to give preliminary and detailed estimates of projects managed by the DPW.

**Description.** Through lectures, individual study and class exercises, this class teaches students how to estimate jobs and enter the associated information in IFS. Students will learn how to phase jobs and develop a Bill of Materials. Also covered in this class are the interactions between Work estimating, and other Integrated Facilities System (IFS) modules, and the impor-

tance of the Planner/ Estimator relationship with the customer ordering the work and the craft personnel performing the work.

**Prerequisites.** It is recommended that nominees should have three months experience in job estimating, job scheduling or related fields.

<u>Session</u>	<u>Location</u>	<u>Date</u>	
2001-1	Huntsville, AL	8/21/2001	8/24/2001
2001-2	Huntsville, AL	8/27/2001	8/30/2001

## DPW WORK RECEPTION

**Long Title: DPW Work Reception Functional Training**

**980**                  Length: 24 Hours                  46DWR01A  
**CEUs: 0.0**                                      Tuition: \$600.00

**Purpose.** This course is for Service Order clerks, Work Order receptionists and customer service personnel or anyone, within the Directorate of Public Works (DPW) on an Army installation or community, responsible for receiving service orders and work orders from customers. This course will provide students with a description of the DPW organization with emphasis on the collection of customer work requests.

**Description.** Through lectures, individual study and class exercises, this class provides students with an overview of the entire DPW function with emphasis on the reception of work from the customer. Students will learn how to enter service orders and work orders into IFS and how to answer service order and work order status inquiries from customers. The students will receive information on customer satisfaction techniques such as how to determine if the shops are behind schedule so as to keep the customer informed of delays. Helping customers prioritize their own work requests will be demonstrated. How to deal with irate or rude customers will be covered. The philosophy that the customer comes first and the fact that all DPW jobs are directly related to customer satisfaction will be stressed. Work receptionists will learn review and analysis techniques such as random sampling of customers to determine if the DPW is satisfying the customers. Students will learn how to record the results of random sampling and incidents of specific customer satisfaction or dissatisfaction and how to present these results to management. The course will also describe how the Integrated Facilities System (IFS) informs work receptionist that a facility is contaminated or that equipment is under warranty.

**Prerequisites.** It is recommended that nominees should be in a current or projected assignment in, or relating strongly to, Work Reception.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2001-1	Huntsville, AL	6/12/2001 6/14/2001



## DREDGE ESTIMATING

**Long Title:** *Dredge Cost Estimating*

**118**                      **Length: 36 Hours**                      **54DGE01A**  
**CEUs: 2.8**    **Tuition: \$1,690.00**

**Purpose.** This course provides an understanding of cost estimating for dredging projects. Methodology for cost estimating of pipeline, hopper, and mechanical dredging is presented.

**Description.** Through lectures, discussion, demonstrations and class problems, the course covers the current requirements for the preparation of dredge cost estimates. Specific emphasis is placed on definitions, equipment selection, productivity and cost detail development in the preparation of cost estimates for projects utilizing pipeline, hopper, and mechanical dredges. These principles are further discussed in relationship to the current (upgraded) EXCEL windows version of the CEDEP software.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: 0800; (b) Grade: GS-07 or above; (c) Completion of the Dredging Fundamentals course or equivalent. Nominees are those who have a need to learn more about cost estimates for dredging projects. These employees are envisioned to work in the engineering, operation, planning, or construction divisions of Corps Districts or Divisions. Their educational background should not be less than that of an engineering technician or equivalent. (d) Nominees should be knowledgeable of computer software and computer spreadsheet programs.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2001-1	Huntsville, AL	4/23/2001 4/27/2001

## DREDGE FUND

**Long Title:** *Dredging Fundamentals*

**333**                      **Length: 36 Hours**                      **54DFM01A**  
**CEUs: 2.5**    **Tuition: \$1,820.00**

**Purpose.** This course provides the student with fundamental theories and practices involved with the dredging process.

**Description.** Through lectures, group discussions, examinations, and a field trip, this course teaches the student fundamental dredging theory and accepted dredging practices in addition to basic information on how Corps dredging projects are engineered, managed, and maintained. A brief overview of dredge estimating, dredging safety, hydrographic surveys, and dredging contract administration is also provided. A field trip to see operating dredge equipment is included to help the student understand the material taught in the classroom. This course is a prerequisite for the Dredge Contract Administration Course, and Dredge Estimating.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: Dredging related; (b) Grade: GS-04 through GM-13. Students should bring clothing appropriate for a field trip aboard an operating dredge, normally located on open water. Safety and/or tennis shoes are acceptable for secure footing on open deck areas. The Corps will provide PFD's, hard hats, and hearing protection. The use of cellular telephones, pagers, laptop computers, or other devices which may cause disruption with the instructors presentations during the classroom sessions will not be allowed. Use of these items for other than subject matter instruction will be grounds for immediate dismissal.

**Notes.** This course contains a requirement of a field trip to an operating dredge. The field trip may run past the 8 hour training day. It is estimated that 4 hours of overtime may be required for this field trip.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2001-1	New Orleans, LA	6/18/2001 6/22/2001
2001-2	New Orleans, LA	6/25/2001 6/29/2001

## DREDGE SAFETY

**Long Title:** *Floating Plant and Dredging Operations - Safety Requirements*

**081**                      **Length: 32 Hours**                      **58FPD01A**  
**CEUs: 0.0**    **Tuition: \$1,900.00**

**Purpose.** This course provides personnel with current safety and health information with which they will be able to perform required safety and health inspections of Corps of Engineers and contractor owned floating plant and dredging equipment and/or operations. The intent of this training is to familiarize students with pertinent safety and health requirements, including the Corps of Engineers Safety and Health Requirements Manual (EM 385-1-1), US Coast Guard requirements, applicable Codes of Federal Regulations, and other industry standards pertaining to floating plant and dredging equipment and operations.

**Description.** This course is designed for Corps of Engineers personnel that are assigned to organizational elements that have responsibility for purchasing, maintaining, inspecting, and operating floating plant and dredging equipment and/or operations. Some of the specific areas to be covered in this course, through open discussion, lecture, video tapes, on-site visit, and practical exercises, include the following topics: (a) overview of applicable safety standards; (b) types of floating plant/dredges; (c) in-depth review of Section 19 of EM 385-1-1; (d) reviewing contractor safety submittals; (e) contractual safety requirements and/or specifications; (f) electrical safety on floating plant; (g) fire prevention and required on-board equipment; (h) rigging and hoisting equipment; (i) confined space requirements; (j) Corps diving standards; (k) how to perform safety inspections and record findings; (l) on-board inspection of dredge (practical exercise); (m) accident investigation and reporting; and (n) contingency/emergency operations.



**Prerequisites.** Nominees should include dredging inspectors, quality assurance representatives, project and resident engineers, safety specialists, managers, and/or engineers, and personnel in other career fields that have an interest in floating plant and dredging safety. Student should have completed the PROSPECT "Dredging Fundamentals" course (#333) or have a solid understanding of floating plant and dredging equipment and/or operations.

Session	Location	Date
2001-1	New Orleans, LA	6/11/2001 6/14/2001

### DREDGE: CONT ADMIN

**Long Title:** *Dredging: Contract Administration*

**211**                      **Length: 24 Hours**                      **41DCA01A**  
**CEUs: 1.8**

**Purpose.** This course teaches the basics of dredging contract administration.

**Description.** Through lectures, group discussions, case studies, and examination, this course provides the student with information on how to successfully administer dredging contracts and the problems associated with the activity. Included in classroom discussions is how dredging projects are engineered, the operational aspects of various types of dredges, the factors involved for managing dredging projects, the safety aspects of dredging and dredge equipment, and the procurement techniques and documents used to accomplish the work.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: 0800, 0810; (b) Grade: GS-07 to GM-14. Individuals who are assigned as project managers, contract administrators or are responsible for dredging contracts in any capacity are eligible to attend. Nominees must have attended the Dredging Fundamentals course prior to attending this course unless this requirement is waived for individual nominees by CECW-OD.

Students should bring a copy of recent dredging plans and specifications to assist with case studies.

**Notes.** The use of cellular telephones, pagers, and laptop computers during the course of instruction will not be permitted. Use of these items during the conduct of course instruction will be grounds for immediate dismissal from the course.

### DRILLING & SAMPLING

**Long Title:** *Drilling and Sampling for Engineering Purposes*

**216**                      **Length: 36 Hours**                      **35DSE01A**

**Purpose.** This course provides engineers, geologists, and field inspection personnel with the latest CE and industry methodology for planning, implementing, and

evaluating field drilling and sampling projects. It also enhances understanding of methods, mechanics, and products available and evaluates requirements and adequacies of various aspects of these fields. Applicable remote sensing and instrumentation procedures are outlined.

**Description.** Topics covered are (a) philosophy of field exploration; (b) planning an investigation; (c) drilling methods and machines; (d) effects of sample disturbance on engineering properties; (e) drilling muds; (f) effects of sample disturbance; (g) rock sampling procedures; (h) soil sampling procedures; (i) soil sampling preservation; (j) special excavations; (k) vane shear/cone penetration devices; (l) special devices, optical and geophysical; (m) field permeability (pumping and pressure testing); (n) instrumentation; (o) sampling hazardous materials; and (p) monitoring contracted drilling operations.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: Selected 0800, 0810, 1310 and 1350; (b) Grade: GS-05 through 12.

### E&D QUALITY MGT

**Long Title:** *Engineering and Design Quality Management*

**208**                      **Length: 24 Hours**                      **35EQM01A**  
**CEUs: 1.7**    **Tuition: \$1,190.00**

**Purpose.** Improve project quality and customer satisfaction by training team members in the principles, processes, and tools of Engineering and Design Quality Management (E&D QM).

**Description.** The student will be able to effectively apply E&D QM policies, principles, processes, and tools in planning and design of projects. Emphasis is given to project planning, criteria development, designer selection project design and review, construction and operations, and maintenance phases. The Civil Works, Military Programs, Support For Others, and Environmental project delivery processes are presented from the perspective of improving the technical quality, timeliness and cost effectiveness. The course covers the design of projects by private sector architect engineer firms and in house technical personnel. Classroom presentations are supplemented by active classroom discussions and group exercises.

This course covers (a) Introduction to Total Quality Management (TQM) and ISO 9000; (b) E&D QM policies and principles; (c) E&D QM during project predesign, design and construction phases, (d) QA/QC policy and Independent Technical Review (ITR) process; (e) E&D QM implementation and quality measurements.

**Prerequisites.** Grade: GS-07 and above; Series: 0800 and 0340; Corps team members involved with the project delivery process. Customers and employees of other agencies having an interest in Corps E&D QM processes are encouraged to participate.



<u>Session</u>	<u>Location</u>	<u>Date</u>
2001-1	Jacksonville, FL	3/20/2001 3/22/2001
2001-2	Albuquerque, NM	6/12/2001 6/14/2001

### **EARTHWORK—QV**

**Long Title:** *Quality Verification: Earthwork Construction*

**040**                      **Length: 36 Hours**                      **35EWI01A**  
**CEUs: 2.4**    **Tuition: \$1,180.00**

**Purpose.** This course provides the participant with proper earthwork inspection techniques and improves quality assurance management on construction projects. Insight is also provided as to the technical reasons behind construction requirements and how these requirements contribute to successful construction.

**Description.** Through lecture, conference sessions, laboratory demonstrations and practical exercises this course covers the field of soils identification, soil sampling and testing, and techniques for earthwork inspection and testing. This course primarily teaches earthwork embankment construction, although some material pertaining to building foundation preparation is included.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: 0801, 0802, 0809, 0810, 0830, and 0850; (b) Grade: GS-02 to 09. Students should have a current or projected assignment as a general or earthwork construction inspector or related duties at the field level. This course is also well suited for junior engineers as part of the training provided in Engineer-In-Training programs, and for Corps division, district, and field office personnel directly concerned with construction operations. Nominees must not have attended this or a similar course within the past 5 years.

**Notes.** This course is not a prerequisite for the Quality Verification: Earthwork Construction II course. The only difference in the courses is the level of instruction.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2001-1	Vicksburg, MS	1/22/2001 1/26/2001

### **ECOLOGICAL RESOURCES**

**Long Title:** *Ecological Resources: Identification, Analysis, and Evaluation*

**168**                      **Length: 36 Hours**                      **33ERI01A**  
**Tuition: \$1,830.00**

**Purpose.** This course provides students with a working knowledge of current techniques and methods that can be used to identify, analyze, and evaluate ecological resources. Emphasis is placed on state-of-the-art procedures for inventory and data collection and evaluation of natural resources required for compliance with Federal laws, Executive Orders, and Corps of Engineers policy and planning guidance. Ecological re-

sources include broadly defined fish and wildlife populations, habitats, and their relationships to each other and the environmental/ecosystem. While the course is not an introductory level course, it is assumed that the student has limited or outdated knowledge of fish and wildlife population dynamics, vegetation sampling, and assessment techniques for these resources.

**Description.** Corps planning guidance and the "Principles and Guidelines" for planning water resources projects are used as the basis to describe the information required for ecological resources evaluation. Emphasis is placed on describing and demonstrating cost-effective, state-of-the-art techniques and procedures for identifying, inventorying, assessing, evaluating, and displaying ecological resources information. Habitat assessment procedures and inventory techniques are described and demonstrated for birds, mammals, reptiles, amphibians, and fishes. Emphasis is placed on those techniques that can be used to inventory sensitive species and evaluate their habitat or potential habitat. Students receive hands-on training through field trips taken to both terrestrial and aquatic sites where they conduct selected animal inventories and habitat assessments. Students will be provided with key sources of ecological resources information and technical assistance within the Corps, other agencies, and outside sources. Instructors emphasize that ecological resources cross geographic and political boundaries and encourage interdisciplinary and cross-stovepipe collaboration.

**Prerequisites.** a. This course is primarily for technical personnel whose duties involve the identification, evaluation, analysis or management of ecological resources. Project and Program Managers responsible for project and program management activities, particularly those involving ecosystem restoration, would also benefit. b. Occupational Series: Primarily 0028, 0400, and 1300. c. Grade: GS-09 or above. Disciplines (other than the above) may be accepted provided nominee's present or anticipated duties involve the management, analysis, identification, or evaluation of ecological resources.

**SPECIAL INSTRUCTIONS:** Much of this course involves field exercises. Therefore, students should prepare to work in both upland and aquatic environments and to bring appropriate shoes and clothing. Special tours may be available after class hours.

**Notes.** This course contains requirements that are mandatory for course completion and may require an estimated 8 hours of work outside of normal class hours. It is your responsibility to bring this to the attention of your supervisor so that an overtime request can be made by appropriate personnel. It is also your responsibility to certify the amount of time expended on these requirements to your supervisor when you request overtime compensation.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2001-1	Vicksburg, MS	4/30/2001 5/4/2001



**NEW**

**ECOLOGY FOR ENGINEERS**

**Long Title: Ecology For Engineers**

**103**                      **Length: 36 Hours**                      **33EFE01A**  
**CEUs: 0.0**    **Tuition: \$2,520.00**

**Purpose.** This course provides Corps of Engineer personnel with basics and state-of-the-art knowledge of ecology. Students are given an overview of current ecological paradigms and procedures to serve as background for impact analysis, environmental management, and ecosystem restoration.

**Description.** Understanding and resolving complex environmental issues for assessing impacts of engineering activities, and managing and restoring ecosystems are increasingly being recognized to require a multidisciplinary effort involving the teaming of ecologists and engineers. The focus of the course will be on basic concepts of ecology. Terminology, paradigms, goals and basic assumptions particularly for monitoring and modeling will be considered. Lectures on basic ecological concepts and associated case studies will introduce students to current and historical ecological concerns. Exercises with computer-based models and simulations will be used to demonstrate concepts introduced in lectures. The material will be integrated into a consideration of how to apply course material to on-the-job situations. Learning objectives will focus on (1) becoming conversant in current ecological thinking, terminology, and methodology in order to valuably participate in ecosystem management; and (2) being able to identify the conceptual and empirical bases for impacts and restoration at the population, community, ecosystem, and landscape levels.

**Prerequisites.** Nominees must be assigned: (a) Occupational series: 0800, (b) Grade GS-09 and above. This course is meant primarily for engineers who have duty assignments in planning, operations or regulatory functions; however, physical scientists, social scientists, attorneys, economists, and other professionals with these assignments and with some background in mathematics may find the course useful.

**NOTE.** One or more modules of this course may be taught in distance learning mode. This may cause a shortening of the length course. Should this happen, offices will be notified immediately.

Session	Location	Date
2001-1	TBD	7/23/2001 7/27/2001

**ECON ANALYSIS MILCON**

**Long Title: Economic Analysis - Military Construction**

**101**                      **Length: 36 Hours**                      **35EAM01A**  
**CEUs: 0.0**    **Tuition: \$1,850.00**

**Purpose.** This course explains the fundamental principles and procedures for developing economic analysis

(E/A) in support of military construction and capital investment projects. The practical application of economic principles is provided through "hands-on" computer training sessions in which participants develop economic analyses using the Army's economic analysis package, ECONPACK for Windows.

Economic Analysis is an integral and required justification for military construction project and capital investment proposals. This course is specifically designed to enable participants to prepare adequate, analytically accurate economic analyses in support of project funding requests to OSD and Congress. Lectures, work group exercises, practical exercises, and computer sessions are used to familiarize participants with the theoretical principles and automated capability to formulate, develop, document, and evaluate E/A.

**Description.** Specific topics include (a) an overview of economic analysis as it relates to the planning, programming, and review process; (b) the economic analysis process: the logical sequential process used to develop E/A; (c) life-cycle cost analysis: terms and definitions; (d) the concept of equivalence, the time value of money, and the discounting and treatment of inflation; (e) life-cycle cost calculations: net present value, savings-to-investment ratio, discounted payback period; (f) sensitivity analysis: testing data uncertainties; (g) using the automated system, ECONPACK for Windows, to perform calculations, document, and report analysis results; and (h) automatic transfer of completed economic analyses to a DD Form 1391.

**Prerequisites.** Nominees must be assigned to current positions involved with planning, preparing, programming, or reviewing requests for government construction or capital investment projects.

\*Other: Attendees must have been assigned a PAX computer user ID by HQUSACE (CEMP-MC) prior to attending the course. All computer charges incurred during the training will be billed to the user and are not included in the tuition for this course. Nominees must bring a pocket calculator to this course.

Session	Location	Date
2001-1	Huntsville, AL	1/29/2001 2/2/2001

**ECONOMIC ANALYSIS-WRP**

**Long Title: Economic Analysis in Water Resources Planning**

**270**                      **Length: 36 Hours**                      **35EAW01A**  
**CEUs: 0.0**    **Tuition: \$1,300.00**

**Purpose.** This course is designed to provide an overview of the requirements and procedures for conducting economic analysis of Corps of Engineers water resources planning projects. Some form of economic analysis, including benefit/cost analysis, cost effectiveness analysis and or economic impact analysis is required of all Corps projects, whether they be for flood control, navigation, dredging, water supply, environ-



mental mitigation and restoration or other project purpose. The course is designed to help students better understand the Corps planning process and where they, as economist, fit into that planning process. The course will also provide information on how to think about and analyze new problems and situations.

**Description.** This course includes discussion on (a) the economist's role in the Corps of Engineers (Who is your audience, your customer? What are your products?); (b) introduction on principles and guidelines — how the economist's job is influenced by P&G; (c) how to think as a Corps economist in National Economic Development (NED) terms (including new technologies such as risk and uncertainty); (d) evaluation by project purpose using the NED manuals (the incorporation of R&U into evaluation by project purpose); (e) other evaluation techniques (cost effectiveness, incremental cost analysis, economic impact analysis); (f) the changing role of economic analysis: Environmental Restoration, Rehabilitation, Watershed Planning, Section 216; (g) expected problem areas and how to think about them — emphasis will be on with/without project condition, NED vs. Regional, Economics vs. Cost Sharing; and (h) how to plan your work with emphasis on Initial Project Management Plan (IPMP).

**OBJECTIVES.** Upon successful completion of this training, attendees will be able to (a) define the requirement within P&G for economic analysis in Water Resource Planning; (b) describe the NED concept as defined by the P&G; (c) use the NED Manual Series for project evaluation; (d) identify three different economic analysis techniques; (e) list source information for data required for economic analysis; and (f) list three tools for conducting economic analysis.

**Prerequisites.** This course is designed primarily for NEW Corps Economists and/or those personnel requiring a basic understanding of what economist do in conducting economic analysis of water resources projects, particularly project managers.

Session	Location	Date
2001-1	Springfield, VA	3/5/2001 3/9/2001

### ECOS PLN/MGT ISSUES

**Long Title:** *Ecosystem Planning and Management Issues*

**264**                      **Length: 36 Hours**                      **33AER01A**  
**CEUs: 0.0**    **Tuition: \$1,650.00**

**Purpose.** This course provides a specialized base of knowledge for effectively dealing with major current ecological resources issues and integrating them into an ecosystem setting. Management of public lands is increasingly impacted by evolving technical and political issues. Many issues are regional or national in scope, and this course provides a forum for discussion of current topics.

**Description.** Current ecological issues will be presented through a series of seminars, lectures, group

forums, practical exercises, and case studies. Focus is on the relationship of national issues to actions and responsibilities required of Corps districts, military installations, and other agencies. Instructors will provide background information on selected topics and related issues, and case studies will be used to illustrate planning and management issues at projects and military installations. Students will interact through group forums to discuss and search for solutions to issues affecting ecological resources at their occupational sites. Topics to be covered include issues such as: (a) ecosystem structure and management; (b) biodiversity; (c) threatened and endangered species; (d) migratory species; (e) buffers and corridors; (f) non-indigenous species; (g) cumulative impacts; (h) mitigation planning and banking; and (i) habitat restoration. Emphasis will be placed on incorporating solutions related to these topics into agency activities from an ecosystem perspective.

**Prerequisites.** a. This course is primarily for personnel in Planning, Operations, or project management functional areas. Military installation natural resources personnel would also benefit. b. Grade: GS-09 and above. c. Basic background in ecology, fisheries, and/or wildlife sciences. d. Occupational Series: Primarily 0028, 0400, and 1300.

Session	Location	Date
2001-1	Vicksburg, MS	7/23/2001 7/27/2001

### ECOSYSTEM RESTORATION

**Long Title:** *Interdisciplinary Training for Ecosystem Restoration*

**280**                      **Length: 36 Hours**                      **33ECR01A**  
**Tuition: \$1,970.00**

**Purpose.** The restoration and protection of environmental resources in our Nation's ecosystems is a project purpose in the Corps of Engineers civil works program. Guidance has been sent to Corps field offices on planning ecosystem restoration projects (EC 1105-2-210). This course will provide an interdisciplinary perspective on ecosystem restoration, protection, and management. Students will learn the principles and vocabulary of selected disciplines outside their own and will become familiar with relevant case studies and issues in planning and conducting ecosystem restoration projects. At the end of the course, students will have a more holistic understanding of ecosystems and the requirements for successfully restoring, protecting, and managing them.

**Description.** Through a series of lectures, practical exercises, and field trips, students will be introduced to basic concepts in ecology, hydrology, geology, and soil sciences as they interrelate within a given ecosystem. These basic concepts will be explored and evaluated for their roles in the restoration, protection, and management of degraded ecosystems. Emphasis will be on ecological interactions and scale-dependent relationships among water, soil, and biota. The structures



and functions within an ecosystem will be discussed and related to real-life situations and projects, as appropriate. Relevant models and computerized tools will be demonstrated (e.g., decision support systems, landscape metrics, etc.).

**Prerequisites.** (a) This course is meant primarily for engineers and scientists involved in the planning, operation, and management of ecosystem restoration projects, including permits under the Clean Water Act that would involve ecosystem restoration; (b) Grade: GS-09 and above; (c) A Bachelor of Arts or Science degree or higher; and (d) Occupational series: 0200, 0100, 0400, 0801, 0807, 0810, 0819, 0905, 1301, 1315, 1350.

Session	Location	Date
2001-1	Vicksburg, MS	5/21/2001 5/25/2001

### ELEC EXTERIOR DESIGN

*Long Title: Electrical Exterior Design*

**090** Length: 36 Hours **35ESC01A**  
**CEUs: 3.3** Tuition: \$1,630.00

**Purpose.** This course presents an overview of the basic rules to be followed in the design, construction and maintenance of electrical substations, grounding, switchyards, overhead and underground power and communication lines, and coordination. It provides a sound basis for understanding the intent of the National Electrical Safety Code (NESC), applies the code in practical situations, and presents the Corps' policy and guidance, as documented in technical manuals and guide specifications, to the student.

**Description.** (a) INTRODUCTION: This segment presents the Technical Manuals and Corps of Engineer Guide Specifications applicable to exterior design. The development, structure and application of the NESC is also presented in this introductory session. The responsibilities of utility system operators are stressed in the discussion of rules covering the purpose, scope, application and intent of the code. A general discussion of electrical loss versus equipment costs illustrates why different voltage levels are used for different applications. (b) GROUNDING: This portion addresses fundamentals of grounding and a discussion of the grounding rules. The fundamental discussion includes earth grounding, operation of protective equipment, flow of current to the electrode and its transfer to the earth, and electrode effectiveness. Grounding rules cover the point of connection of the grounding conductor, the grounding conductor properties, the means of connection, grounding electrodes and methods of connection, and ground resistance. Special attention is given to the allowed connections between grounding conductors and electrodes serving low voltage secondary circuits and those serving high-voltage distribution lines and equipment. (c) ELECTRIC SUPPLY STATIONS: This segment presents equipment arrangements in substations including enclosure of equipment and equipment selection. Also emphasized are requirements for maintenance of equipment, including inspections, protective grounding, guarding of live parts and working space around live equipment.

(d) DESIGN, CONSTRUCTION, AND MAINTENANCE OF OVERHEAD ELECTRIC SUPPLY LINES: This portion addresses the design and construction of equipment, grounding, clearances, and strength and loading. The fundamental concepts and requirements of the NESC are explained and discussed in detail. Students learn to work with design/construction information in classroom discussions. (e) DESIGN, CONSTRUCTION, AND MAINTENANCE OF UNDERGROUND DISTRIBUTION SUPPLY LINES: Emphasis is placed on conduit design/construction, supply cable requirements, direct buried cables, risers and terminations, equipment concerns, and tunnels. (f) POWER SYSTEM PROTECTION AND COORDINATION: This segment identifies the nature of short circuits and short circuit protection philosophy. Protective device coordination will be discussed in the classroom with sample problems. (g) FACILITY DESIGN: This session develops a detailed design of a facility including connections to power station, overhead/underground wiring system, transformers, service equipment, meters, grounding, and protection systems.

**Prerequisites.** Nominees must be assigned Occupational Series: 0801, 0802, 0809, 0850, and 0855 and other electrical professions. Recommend that all nominees complete the National Electrical Code course. Nominees in occupational series 0809 should also have completed the Electrical Inspection and the General Verification course. The nominees should have a basic knowledge of the design and/or construction and maintenance of substations, switchyards, and overhead and under-ground power and communication lines.

Session	Location	Date
2001-1	Huntsville, AL	2/12/2001 2/16/2001

### ELECT SECUR SYS DES

*Long Title: Electronic Security Systems Design*

**360** Length: 36 Hours **55ESS01A**  
**CEUs: 0.0** Tuition: \$1,250.00

**Purpose.** This course provides a forum in which the students will gain a basic understanding of the theory and operation of electronic security systems. The course is recommended for personnel who are involved with force protection, design, or construction of military or civil facilities which require electronic security systems.

**Description.** This course covers intrusion detection systems, interior and exterior intrusion detection sensors, closed circuit alarm assessment television and lighting systems, and electronic entry control systems. The course covers basic system description and operational theory, application for physical security and force protection, system design information, preparation of plans and specifications, use of Corps of Engineers criteria documents, and discussion on evaluating and testing installed systems prior to acceptance. Some basic design calculations are included. After



completing this course, the student should be conversant in basic interior and exterior sensor application, and have a good understanding of the overall design philosophy and application limitations of electronic security systems.

**Prerequisites.** Grade: GS-07 (or Military E-5) or higher involved with using, planning, designing, or managing electronic security systems.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2001-1	Huntsville, AL	3/5/2001 3/9/2001

### ELECTRICAL DESIGN I

*Long Title: Electrical Design I*

**373**                      **Length: 36 Hours**                      **35ED101A**  
**CEUs: 3.3**                      **Tuition: \$1,520.00**

**Purpose.** This course clarifies criteria and practices to assure an adequate design and review of electrical features of military projects and to improve design quality. The course will develop the complete electrical design of a 4000 Sq. M. office building, including sizing of service, distribution equipment, feeder and branch conductors, transformers, panelboards, grounding components, fire alarm and fire pump, exterior and interior lighting, and lightning protection.

**Description.** (a) INTRODUCTION AND DESIGN PROCESS: This session discusses project development, an overview of DD Form 1391, design steps, and cost codes. An overview of the site plan, floor plan, and one-line diagram is presented. (b) FACILITY CONNECTION/ONE LINE DIAGRAM: This session develops a one line diagram from the electrical distribution system connection to the building service entrance equipment. Emphasis is on equipment selection and sizing in accordance with Corps criteria, codes, and good engineering practice. (c) LIGHTING DESIGN: This session includes selection and application of interior and exterior lighting fixtures and emergency and exit lighting systems. Interior lighting calculations (using the zonal cavity method) and exterior lighting calculations (using the point-to-point method) are discussed and demonstrated. (d) ELECTRICAL CALCULATIONS: This session includes calculations for branch circuits and feeders, fire pump motor circuits, and panel schedules; short-circuit currents (using the per-unit system and the point-to-point method), voltage drop calculations, and demand and diversity factors. (e) FIRE ALARM AND LIGHTNING PROTECTION SYSTEMS: This session discusses the specific application of NFPA 72 and 101 to the design of the office building. Placement of notification appliances and signaling devices are determined along with the development of the riser diagram. Also covered is the design of the building lightning protection system using NFPA 780 and TM 5-8 11-3. (f) ELECTRICAL POWER SYSTEMS: This session discussed the electrical design requirements for UPS, harmonics, transformers, surge protection, grounding, and emergency power.

**Prerequisites.** Nominees must be assigned Occupational Series: 0850, 0855, and 0801 and others with electrical engineering responsibilities. Grade: GS-05 or higher. Nominees should have a basic background in the practical applications of electrical and electronic projects.

NOTE. Students should bring a scientific calculator and a copy of the current NEC.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2001-1	Denver, CO	3/19/2001 3/23/2001

### ELECTRICAL DESIGN II

*Long Title: Electrical Design II*

**374**                      **Length: 36 Hours**                      **35ED201A**  
**CEUs: 3.3**                      **Tuition: \$1,730.00**

**Purpose.** This course clarifies criteria and practices to assure an adequate design or review of electrical features of military and civil projects. The materials covered in this session increase proficiency in the design/review of electrical systems, improve design quality, eliminate/reduce field change orders due to design deficiency during construction phase, and minimize the cost growth within Headquarters USACE goal.

**Description.** (a) COURSE OVERVIEW: This session discusses the required steps in the development of electrical system designs for military and civil works projects. (b) HEALTH CARE FACILITIES: This session discusses the most significant considerations involved in the electrical systems design of health care facilities. (c) ALTERNATE POWER SYSTEMS: This session discusses design requirements for uninterruptible, standby, and emergency power systems for mission-critical facilities and health care facilities. (d) ENGINE GENERATOR SET APPLICATIONS: This session acquaints the designer with the components of engine generators and discusses the design parameters and features for engine generator set applications. (e) HAZARDOUS LOCATIONS: The first hour defines various types and classifications of hazardous locations along with wiring methods employed for each type. The second hour covers various occupancies which are inherently hazardous by nature of their function as well as electrical requirements specific to each type of occupancy. (f) ELECTRICAL ENERGY SAVINGS: This session discusses the electrical energy conservation system in some detail. Calculations and system design and examples are presented. Examples and calculation of voltage drop, power factor, system voltage, harmonics, linearity, balancing radial/loop systems, overhead/underground, grounding, electrical distribution systems, and other electrical issues are included. (g) FIRE ALARM SYSTEMS: This session includes discussion of the design requirements of signaling and detection circuits. Also, design of the fire protective signaling systems based upon NFPA and DOD requirements is included. (h) HARMONICS: This session discusses the design of electrical distribution



systems where non-linear loads exist. The effect of harmonics on linear loads is discussed. Design considerations and options to minimize the effects of harmonics are presented. (i) CATHODIC PROTECTION: This session discusses galvanic corrosion and design of sacrificial cathodic protection systems. (j) CIVIL WORKS: This session discusses electrical systems used in civil works projects including pump motors and controls, water control structures, SCADA systems, diesel engine - driven generators, transfer switches, gate control systems and recreational facilities. (k) WIRING SYSTEMS AND APPLICATION ISSUES: This session discusses wiring and cabling systems, telephone systems, and fire protection systems including fiber optic cable applications. (l) DESIGN ISSUES: Using knowledge gained in the design course, the students will, with the help of the instructors, improve design quality and cost effectiveness of their projects. Practical examples and design problems will be discussed. (m) AIRFIELD LIGHTING: This session discusses the electrical wiring system requirements for airfield lighting and control. Design issues will be presented and discussed.

**Prerequisites.** Nominees must be assigned Occupational Series: 0850, 0855, and 0801 and other electrical professions. Nominees should be electrical and electronics engineers with a background in the practical applications of a wide range of electrical and electronic projects.

Session	Location	Date
2001-1	Las Vegas, NV	1/22/2001 1/26/2001

### ELECTRICAL—QV

**Long Title: Quality Verification: Electrical**

**042 Length: 36 Hours 35ELC01A**  
**CEUs: 3.0 Tuition: \$1,120.00**

**Purpose.** This course provides the participant with (a) requirements and techniques of electrical quality assurance to comply with contract requirements; (b) increased knowledge of materials, equipment, installation, and quality assurance techniques; and (c) training in interpreting plans and specifications and the National Electrical Code.

**Description.** Through lectures and directed conference sessions, this course presents methods of quality assurance for interior and exterior distribution, motors, controls, lighting, special alarm systems, grounding and hazardous locations, and other electrical installations. It also places emphasis on enforcement of contract requirements, compliance with electrical safety, the electrical code, and the contractor's obligation for quality control under the Corps' quality management program.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: 0801, 0802, 0809, 0810, 0830, or 0850; (b) Grade: GS-05 or above, and equivalent.

Students should have a current or projected assignment as an electrical or general quality assurance representative. Engineers are exempt from these eligibility requirements.

Session	Location	Date
2001-1	Albuquerque, NM	7/23/2001 7/27/2001

### ELECTRONIC BID SOLICIT

**Long Title: Electronic Bid Solicitations**

**437 Length: 20 Hours 41EBS01A**  
**CEUs: 0.0 Tuition: \$820.00**

**Purpose.** This course provides instruction in the preparation of Electronic Bid Solicitations.

**Description.** Students are instructed in the procedures for the preparation of Electronic Bid Solicitations (EBS). Course topics include the history of EBS, legal issues, advertisement, hardware and software requirements, placing files on the Internet, converting text documents to PDF format, converting CADD files to CALS format, organizing files, creating a master CD, CD reproduction and distribution, and issuing amendments. Hands on exercises guide the student through the entire process of producing an EBS. Demos are presented to show the students EBS web sites and recent projects.

**Prerequisites.** Students should be in the 0800 Series: Engineers, Architects, and Technicians; 1100 Series: Contracting and Information Management Personnel. Grade: GS-07 or above. They should also have a basic understanding of the bid solicitation process and a working knowledge of computers.

Session	Location	Date
2001-1	Huntsville, AL	10/31/2000 11/2/2000

### ENG/DES CONST WETLND

**Long Title: Engineering and Design of Constructed Wetlands for Water Quality Improvement**

**275 Length: 36 Hours 33CON01A**  
**CEUs: 0.0 Tuition: \$2,150.00**

**Purpose.** This advanced course gives Corps personnel state-of-the-art technical knowledge on how to construct wetlands for water quality improvement. Planning, design, engineering, construction, operations and maintenance, and monitoring will be stressed for civil work projects. Specifically, this course will introduce the latest proven technologies that can be applied to the construction and use of wetlands for surface and wastewater improvement. Wetlands functioning as wildlife habitat, basic soil characterization and wetland delineation, and regulatory issues related to wetlands will not be covered by this course.

**Description.** (a) strong emphasis on planning, design, engineering, construction, and O and M components of wetlands for water quality improvement; (b) in-depth



consideration of a variety of wetlands construction techniques and principles; (c) case studies of important constructed wetlands with lessons learned; (d) open discussion and problem-solving sessions; and (e) field trips to wetlands that are functioning for water quality improvement.

**Prerequisites.** Nominees must have completed the "Wetlands Development and Restoration" PROSPECT course. Nominees must be assigned (a) Occupational Series: engineers, hydrologists, soil scientists, biologists, and others involved in the planning, design, construction, and operation/maintenance of constructed wetlands; (b) Grade level: GS-09 and above.

Session	Location	Date
2001-1	Orlando, FL	3/5/2001 3/9/2001

### ENV IMPACT ASSESS

**Long Title:** *Environmental Impact Assessment of Projects*

169	Length: 36 Hours	33EIA01A
CEUs: 0.0		Tuition: \$1,140.00

**Purpose.** This course provides students with a working knowledge of the environmental impact assessment process and the information, including environmental studies, needed to prepare an environmental impact assessment document or an environmental impact statement.

**Description.** Detailed consideration of the factors to be considered in evaluating the effect of proposed actions upon various aspects of the environment. The data and information required for the environmental evaluation of a major federal action are examined and their sources discussed. Particular emphasis is placed on the physical and chemical factors which can control impacts on biological or cultural resources. The impact evaluation procedures to be followed in complying with the National Environmental Policy Act and with the Procedures and Guidelines for Water Resources Implementation Studies are outlined. Procedures are described and analyzed to assist the preparation and critique of an assessment. Points to be considered in legal challenges are discussed. Coordination and public involvement are addressed. In addition to providing assessment procedures, this course serves as preparation in the physical resource environment for separate courses on ecological and cultural resources.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: Selected 0020, 0100, 0400, 0800, and 1300 or demonstrate special needs related to job responsibilities; (b) Grade: GS-05 or above.

Session	Location	Date
2001-1	Huntsville, AL	4/2/2001 4/6/2001

### ENV REG PRAC APPL

**Long Title:** *Environmental Regulations Practical Applications*

398	Length: 36 Hours	33MEC01A
CEUs: 2.2		Tuition: \$1,080.00

**Purpose.** This course is designed to further the student's understanding and ability to apply the technical requirements of various major federal environmental regulations. This course consists of a review of the technical application of selected environmental requirements pertinent to compliance issues. It will not consist of an exhaustive, detailed study of environmental statutes and regulations.

**Description.** This course is comprised of discussions and practical exercises pertaining to the technical application of various environmental regulations such as RCRA waste classification and generator standards, used oil management, NPDES wastewater and stormwater requirements, SPCC plans, PCB management, Clean Air Act regulations, USTs, SWDA requirements, Spill reporting, Pesticide management, Hazardous materials transportation, and EPCRA requirements. This course focuses on the practical application of these regulations during day-to-day compliance activities at DoD installations, Corps construction projects and Civil Works Projects and Facilities.

**Prerequisites.** Nominees must have worked at least one year on HTRW projects, environmental projects, military construction projects, or civil works environmental compliance projects or have attended an environmental laws and regulations course within the past three years. Target audience includes engineers, scientists (chemists, industrial hygienists, geologists, etc.), Construction personnel, environmental compliance officers, ECAS and ERGO coordinators, environmental protection specialists, and operations personnel responsible for the technical application of various environmental compliance requirements.

Session	Location	Date
2001-1	Omaha, NE	4/23/2001 4/27/2001

### ENVIRON LAWS & REGS

**Long Title:** *Environmental Laws and Regulations*

170	Length: 36 Hours	33ELR01A
CEUs: 0.0		Tuition: \$850.00

**Purpose.** After completing the course, students will be able to (a) list major federal statutes designed to protect the environment\*; (b) summarize the major provisions of each federal environmental law and relationship to activities of the Corps of Engineers; (c) find the federal and state environmental statutes and regulations pertinent to a specific Corps activity, given access to a reference library; (d) identify and state legal requirements for environmental protection related to



specified Corps activity, given access to suitable reference materials.

**Description.** This is a general survey course designed for non-attorneys or for attorneys with limited background in environmental law. Topics include federal laws and regulations for environmental protection; pollution standards and variances; congressional and judicial developments; economic and technical difficulties in meeting standards; relation of the Corps of Engineers to state and federal agencies in meeting standards and enforcing laws; methods of monitoring pollution; legal penalties; litigation techniques; the Rivers and Harbors Act of 1899 regulatory provisions; the National Environmental Policy Act (NEPA); Executive Order 11514; the NEPA regulations of the Council on Environmental Quality; the Federal Clean Water Act; the Federal Clean Air Act; the Resource Conservation and Recovery Act; the Toxic Substances Control Act; the Endangered Species Act; the Fish and Wildlife Coordination Act; the Historic Preservation Act; the Noise Control Act; the Federal Environmental Pesticide Control Act; the Coastal Zone Management Act; regulations of the Environmental Protection Agency; and state laws and regulations.

\*This course is not intended for personnel primarily involved with hazardous and toxic waste projects and does not include detailed coverage of the Resource Conservation and Recovery Act (RCRA), the Comprehensive, Environmental Response, Compensation and Liability Act of 1980 (CERCLA), or the Superfund Amendments and Reauthorization Act (SARA) of 1986.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: Selected 0020, 0100, 0400, 0800, and 0900; (b) Grade: GS-07 or above.

Session	Location	Date	
2001-1	Huntsville, AL	2/26/2001	3/2/2001
2001-2	Dallas/Ft. Worth, TX	4/23/2001	4/27/2001
2001-3	Sacramento, CA	5/7/2001	5/11/2001
2001-4	Atlanta, GA	6/4/2001	6/8/2001
2001-5	Huntsville, AL	6/18/2001	6/22/2001

### ENVIRONMENTAL WRITING

**Long Title: Planning, Organizing, Writing, and Editing EISs and EAs**

**198**                      **Length: 22 Hours**                      **53EVW01A**  
**CEUs: 0.0**    **Tuition: \$1,440.00**

**Purpose.** This course provides instruction for those who prepare NEPA documents (EIS, EA, Supplements) as part of legislative proposals and feasibility studies to help them save time and develop good strategies for planning, organizing, writing, and revising.

**Description.** As a result of the classroom instruction and several workshops, students will be better prepared to (a) interpret regulations and procedures relating to NEPA; (b) use the multi-objective, multi-disciplin-

ary planning framework for producing EAs and EISs; (c) organize material such as options and impacts in a logical manner; (d) design graphic displays; (e) show improvement in writing; (f) edit the writings of others; and (g) analyze Corps documents for correct content and readability.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: Selected 0020, 0100, 0400, 0800, and 1300 or demonstrate special needs related to job responsibilities; (b) Grade: GS-07 or above.

Session	Location	Date	
2001-1	Huntsville, AL	6/25/2001	6/29/2001

**NEW**

### ENVRN REQ/CONSTR PROJ

**Long Title: Overview of Environment Requirements of Corps Construction Projects**

**427**                      **Length: 16 Hours**                      **33ERC01A**  
**CEUs: 0.0**    **Tuition: \$610.00**

**Purpose.** This course provides an overview of environmental regulations applicable to construction activities conducted under the military, civil works, and HTRW programs. An outline of the various requirements under the major environmental regulations will be reviewed with specific focus on the recently revised Environmental Protection CEGS 01355. This workshop will cover the content of the specification from an engineering design perspective and integrate this for implementation in the field.

**Description.** This workshop has been developed by in-house engineering and construction USACE staff and focuses on environmental regulations that impact construction projects. The workshop focuses on environmental permit issues, customer partnering, affirmative procurement, waste management issues, including P2/waste minimization, emergency planning and community right to know requirements, spill control, pest management and water related issues such as the NPDES program and associated storm water regulations. Clean Air Act requirements related to particulate issues (fugitive dust) will also be addressed. Cultural and natural resources, including endangered and threatened species as they relate to the implementation of construction activities will also be discussed.

**Prerequisites.** This workshop has been developed for an audience primarily consisting of construction representatives as well as designers that edit the CEGS 01355 Environment Protection.

Session	Location	Date	
2001-1	Omaha, NE	3/7/2001	3/8/2001



## ENVRNREST/PLAN/EVAL

**Long Title: Environmental Restoration Planning and Evaluation**

**348 Length: 36 Hours 33EBE01A**  
**CEUs: 0.0 Tuition: \$1,270.00**

**Purpose.** Ecosystem restoration has evolved into a priority mission in the Corps' Civil Works program. Together, with traditional environmental mitigation work, restoration work spans the range of resources from fish and wildlife to watersheds and ecosystems. The formulation and evaluation that leads to restoration projects requires an interdisciplinary approach that also involves local sponsors and other stakeholders. This course addresses key areas related to the current practice of environmental and restoration planning: policy, measurement, plan formulation, and cost effectiveness and incremental cost analyses. Case studies will be presented to illustrate current practices.

**Description.** This course includes the following topics: (a) policy: (1) restoration and mitigation, (2) environmental compliance; (b) measurement (1) significance, (2) habitat evaluation and other output measurement procedures, (3) cost estimation, (4) economic evaluation techniques; (c) plan formulation: (1) problems and opportunities, (2) management measures, (3) using ecological models in plan formulation; and (d) cost effectiveness and incremental cost analyses: (1) rationale and procedures, (2) computer software demonstration, (3) hands-on application of analyses, and (e) risk analysis associated with environmental restoration.

**OBJECTIVES.** Upon successful completion of this training, attendees will be able to: (a) list important current policy documents related to environmental restoration and mitigation; (b) list at least three techniques for monetary evaluation, and discuss the merits of each; (c) list at least three techniques for non-monetary environmental evaluation, and discuss the merits of each; (d) use ecological models to identify restoration and mitigation management measures; and (e) conduct a simple cost effectiveness and incremental cost analysis for an environmental restoration project.

**Prerequisites.** This course is designed for Corps personnel involved in planning and designing environmental projects, including planners, biologists, economists, outdoor recreation planners, landscape architects, project managers and other water resource planners. Students with access to Lap-Top PCs are asked to bring them to the class for a hands-on class exercise with Incremental Cost Analysis.

**Notes.** This is not a course on the use of HEP, HES, or any other environmental evaluation technique but rather a more holistic view of how one should approach the formulation and evaluation of environmental projects proposed in their district.

Session	Location	Date
2001-1	Springfield, VA	5/7/2001 5/11/2001

## EST FOR CONST MODS

**Long Title: Estimating for Construction Modifications**

**180 Length: 36 Hours 41ECM01A**  
**CEUs: 2.9 Tuition: \$740.00**

**Purpose.** This course provides intermediate level instructions and ready-reference material to assist in improving the participant's ability to prepare a reasonable estimate for a construction contract modification within Corps of Engineers policies and procedures.

**Description.** Through lectures, conferences, course problems, and case study sessions, this course covers the various elements of a cost estimate (e.g., direct cost, indirect cost, profit, etc.) and the contract provisions and regulations relating to modification estimates. Also covered in the course are the estimating procedures for delays, suspensions, impact, acceleration and review and analysis of contractor cost proposal. The student will be required to complete a detailed cost estimate which will require work to be done after regular class hours. In addition, a mandatory precourse assignment must be completed by the student and brought to the class. A pretest and posttest will also be given.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: Selected 0800 and comparable military; (b) Grade: GS-09 or above and comparable military. This course is designed for engineers, senior construction representatives, or technicians. The nominee must have current or projected responsibility for preparing or providing technical details for preparing construction cost estimates for contract modifications.

This is not a basic level estimating course. Nominees must have attended the Cost Estimating, Basic course (No. 181) or have comparable training or work experience, otherwise a waiver must be processed/approved.

**Notes.** This course contains requirements which are mandatory for course completion and may require an estimated 5 hours of overtime. It is your responsibility to bring this to the attention of your supervisor so that an overtime request/determination can be made by your appropriate personnel. It is also your responsibility to certify the amount of time expended on these requirements to your supervisor when you request overtime compensation.

Session	Location	Date
2001-1	San Antonio, TX	10/30/2000 11/3/2000
2001-2	Huntsville, AL	2/5/2001 2/9/2001
2001-3	San Diego, CA	4/2/2001 4/6/2001



## FACILITATOR WORKSHOP

**Long Title: Facilitator Workshop**

**016**                      **Length: 32 Hours**                      **48FAW01A**  
**CEUs: 0.0**                      **Tuition: \$700.00**

**Purpose.** The PROSPECT Program offers video-based training which is designed for small group instruction at the work site by a local facilitator. The training content, format, and presentation methodology are unique to the Corps. The purpose of this course is to train individuals in the methodology necessary to successfully facilitate this Corps-peculiar training.

**Description.** Through lectures, demonstrations by instructors, and practical exercises by the students, this course covers local responsibilities for the exportable training, materials organization, presentation methodology, scheduling, reporting requirements, and methods to supplement the prepared training materials.

**Prerequisites.** Nominees should be assigned (a) Occupational Series: All; (b) Grade: All. This workshop is strongly recommended for anyone responsible for delivering any of the PROSPECT exportable training courses. Nominees do not necessarily have to have subject matter knowledge or expertise in the subject areas to successfully facilitate a course. The facilitator with subject matter knowledge will be more comfortable with the assigned duties, be able to provide better quality training to the students through addition of local flavor to the instruction, and be able to answer unanticipated questions from the students.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2001-1	Huntsville, AL	2/12/2001 2/15/2001

## FIELD SAFETY

**Long Title: Construction and Operations Safety for Field Supervisors and/or Managers**

**236**                      **Length: 24 Hours**                      **55COS01A**  
**CEUs: 0.0**                      **Tuition: \$1,150.00**

**Purpose.** This course is designed for Corps of Engineers supervisors and/or managers who have responsibility for overseeing contract or in-house construction and operational activities. This 3-day course will provide managers and supervisors with current state-of-art safety technology and methodology as it relates to field work such as earth moving, roofing, mechanical installation, scaffolding and ladders, administrative safety requirements, etc. Through open discussions and group participation, this course will bring together OSHA, Corps of Engineers, and consensus safety standards that apply to typical Corps activities and heighten safety awareness of field managers and supervisors.

**Description.** The basic references for this course are the Corps of Engineers' Safety and Health Require-

ments Manual, EM 385-1-1, and pertinent OSHA standards. This 3-day course will provide, through various formats, that information considered necessary and essential for area, resident, and project engineers, operations managers and/or supervisors in the discharging of their day-to-day safety and health responsibilities. This course also has direct application for other Corps of Engineers field personnel in related career fields, e.g., supervisory rangers, drill crew foremen, lockmasters, hired labor supervisors, survey crew leaders, etc. Some of the specific topics covered in this course will include: (a) overview of EM 385-1-1; (b) legal aspects of employee safety for supervisors; (c) administrative safety and health requirements; (d) review of contractor safety submittals; (e) OSHA and the Corps of Engineers; (f) preparation of Accident Prevention Plans; (g) medical surveillance plans; (h) workers compensation program/alternatives; (i) personnel protective equipment; (j) specific safety standards for field work; (k) accident investigation and reporting; (l) confined space requirements; and (m) industrial hygiene programs.

**Prerequisites.** Nominees must be assigned (a) at the operating level in Corps of Engineers construction and/or operational activities; (b) Grade GS-09 or above; and (c) current or projected assignment as manager, supervisor, foreman, team leader or equivalent.

<u>Session</u>	<u>Location</u>	<u>Date</u>	
2001-1	Albuquerque, NM	5/15/2001	5/17/2001
2001-2	Huntsville, AL	6/10/2001	6/12/2001

## FINANCIAL MGT/COE

**Long Title: Financial Management/Corps of Engineers**

**012**                      **Length: 35 Hours**                      **42FAE01A**  
**CEUs: 3.3**                      **Tuition: \$1,010.00**

**Purpose.** To enhance the attendees' knowledge and understanding of finance and accounting policy, application of that policy, and managerial accounting principles in a CEFMS environment.

**Description.** The concepts of major financial management are presented as related to (and in support of) Corps of Engineers missions and functions. Emphasis will be placed on principles and standards which govern the Corps accounting and financial management.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: 0510 managerial accountants; (b) GS-09 or above with a minimum of one year experience at that grade level.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2001-1	Memphis, TN	4/9/2001 4/13/2001
2001-2	Portland, OR	7/23/2001 7/27/2001



## FIRE EXT SYS DESIGN

**Long Title:** *Fire Extinguishing Systems Design*

**033**                      **Length: 36 Hours**                      **55FES01A**

**Purpose.** This course teaches the basic knowledge and skills necessary for the design, calculation, and review of automatic fire extinguishing systems. The Corps of Engineers requires personnel involved in fire extinguishing system design to be familiar with all systems.

**Description.** The course covers fixed fire protection systems and design of fire extinguishing systems. After completing this course, the student should be able to design/review most types of automatic fire extinguishing systems. The course will emphasize fire sprinkler design.

**Prerequisites.** Nominees must meet the following criteria: (a) Occupational Series: Selected 0800, (b) Grade: GS-07 or above; (c) students must be involved in design/construction of fire extinguishing systems as part of their duties or require this knowledge in their work.

## FIRE PROTECTION

**Long Title:** *Fire Protection Engineering (Basic)*

**006**                      **Length: 36 Hours**                      **55FPE01A**  
**CEUs: 0.0**    **Tuition: \$1,180.00**

**Purpose.** This course teaches architects and engineers the necessary skills and knowledge required to implement the fundamental considerations of fire prevention in building design and construction. After completing the course, the student should be able to design/review basic fire protection analyses and drawings more efficiently.

**Description.** The course covers basic fire protection for facilities. The course includes instruction on fire-rated construction, building and life safety codes, exit requirements, special hazard protection, and general requirements of fire extinguishing systems, fire alarm and detection systems, and water supplies.

**Prerequisites.** Nominees must meet the following criteria: (a) Occupational Series: Selected 0800, (b) Grade: GS-07 or above, (c) students should have a current or projected assignment in a safety office, in an engineer design section, or as a project manager with duties which require a technical knowledge of fire protection engineering principles.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2001-1	Huntsville, AL	2/26/2001 3/2/2001

**NEW**

## FIRMS

**Long Title:** *Fire Information Resource Management System (FIRMS)*

**931**                      **Length: 24 Hours**                      **55FIR01A**  
**CEUs: 0.0**    **Tuition: \$650.00**

**Purpose.** To provide Fire and Emergency Services personnel with a working knowledge of the modules of the Fire Information Resource Management System (FIRMS). This system is used to manage facilities inspections, hoses, hydrants personnel, training, and inventory maintenance information within the fire Department.

**Description.** Through lectures, individual study and class exercises, the students will learn how to enter data into FIRMS and extract the results with standard queries and reports.

**Prerequisites.** Fire Department Personnel with some personal computer knowledge.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2001-1	Huntsville, AL	9/25/2001 9/27/2001

## FLEX PAVE CONST—QV

**Long Title:** *Quality Verification: Flexible Pavement Construction*

**050**                      **Length: 36 Hours**                      **35FPC01A**  
**CEUs: 2.9**    **Tuition: \$1,240.00**

**Purpose.** This course is designed to identify and discuss the requirements for verifying the production and placement of flexible pavements.

**Description.** The course covers current Corps of Engineers techniques for quality assurance of all types of flexible pavements, including (a) subgrade, subbase, and base courses; (b) primes, tacks, and seal coats; (c) surface treatment and slurry seals; and (d) plant mixed bituminous paving mixtures. In addition, it covers necessary field tests, interpretation of results, and verification required to assure the production of quality flexible pavements on construction projects. Instruction includes classroom lectures and laboratory demonstrations.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: Selected 0800, 0801, 0802, 0809, 0810, 0830, and 0850; (b) Grade: GS-05 or above. Students should have a current or projected assignment as a general or asphalt construction quality assurance representative or have related duties at the field level. This course is also well-suited for junior engineers as part of the training provided in Engineer-In-Training programs and for Corps division, district, and field office personnel directly concerned with construction operations. The attendee must not have



attended this course or a similar course within the past 5 years.

**Notes.** This course is also available in exportable format. Refer to Section 3.

Session	Location	Date
2001-1	Vicksburg, MS	10/16/2000 10/20/2000

### FLOOD CONT CHANDES

**Long Title:** *Hydraulic Design of Flood Control Channels*

**396**                      **Length: 36 Hours**                      **35FCC01A**  
**CEUs: 3.2**

**Purpose.** This course trains civil and hydraulic engineers and selected senior technicians to use the latest Corps of Engineers guidelines and criteria for designing flood control channels.

**Description.** The course primarily includes instruction and workshop problems on designing flood control channels and channel restoration projects in natural (soft) materials. The course covers design guidance contained in EM 1110-2-1601, "Hydraulic Design of Flood Control Channels" and EM 1110-2-1418, "Channel Stability Analysis of Flood Control Projects." The course also includes the latest design technology and tools on channel design developed under the Flood Damage Reduction Research Program and some instruction on the design of channels for rapid flow conditions. Major topics include (a) review of open-channel hydraulics; (b) review of movable-boundary flood control channels, including fundamentals of fluvial geomorphology and sediment transport; (c) sediment transport equations, sediment impact analysis and sediment budget calculations; (d) methods for designing the geometric shape, width, depth, slope, and roughness of a channel for optimum flood control effectiveness and stability; (e) hands-on workshops using the computer program known as "SAM" for analysis and design of flood control channels; and (f) miscellaneous topics such as rapid flow design considerations, field data requirements, environmental considerations, local inflows and side drainage, and sediment detention structures, and freeboard computations.

**Prerequisites.** Nominees must be hydraulic engineers or senior technicians with current or planned involvement in the planning or design of flood damage reduction and/or channel restoration projects. Nominees must be assigned (a) Occupational Series: Selected 0800; (b) Grade: GS-07 or above.

### FLOOD DAMAGE - GIS

**Long Title:** *Flood Damage Analysis Tools*

**316**                      **Length: 36 Hours**                      **35FDA01A**  
**CEUs: 0.0**                      **Tuition: \$1,760.00**

**Purpose.** This course provides Corps of Engineers hydraulic engineers, economists, study managers, and other water resources professionals with detailed instructions for using the comprehensive set of HEC and IWR analytical tools for performing flood damage reduction studies using Geographic Information Systems (GIS). Participants will gain hands-on experience in the use of the tools by applying them in workshops. Included in the course are: the Flood Damage Analysis (HEC-FDA), Flood Impact Analysis (HEC-FIA), GeoFDA, and IWR-FIAT (with Marshall-Swift options) programs. The course emphasizes the GIS approach for structural inventories and subsequent formulation and evaluation of flood damage reduction plans. The computations and procedures presented are consistent with requirements of ER 1105-2-100, "Planning Guidance Notebook," and EC 1105-2-205, "Risk-based Analysis for Evaluation of Hydrology/Hydraulics and Economics in Flood Damage Reduction Studies."

**Description.** The presentations and workshop applications associated with the suite of integrated software will feature the use of GIS approaches to aid the analysis and output display of results. Alternative methods for structure inventories will include: grid-cell land use; census block data; spatially referenced business databases; parcels, and field surveys including use of GPS. Analysis examples will demonstrate the use of GeoHMS and GeoRAS for integration of hydrologic and hydraulic data into the flood damage analysis framework. Interactive GIS flood damage calculations for single or user defined groups of structures will be illustrated. Output will be tabular, graphical, and spatial depictions. Plans may also be spatially displayed and compared.

**Prerequisites.** Nominees should be assigned (a) Occupational Series: Selected 0000-0100, 0800, and 1300; (b) Grade: GS-07 or above. Nominees for the course should be primarily working level professionals; however, supervisory personnel in planning sections or economic analysis sections would benefit significantly by being exposed to modern computational methods.

Session	Location	Date
2001-1	Davis, CA	3/12/2001 3/16/2001

### FLOOD FREQUENCY

**Long Title:** *Flood Frequency Analysis*

**123**                      **Length: 36 Hours**                      **35FFA01A**  
**CEUs: 0.0**                      **Tuition: \$1,770.00**

**Purpose.** This course provides a basic understanding



for the correct application of the Interagency Committee on Water Data guidelines on computation of flood flow frequencies. The Flood Flow Frequency Analysis Computer Program is used throughout the course.

**Description.** This course enables the participant to make technically sound discharge-frequency estimates in an efficient manner. The course focuses on the theoretical basis for frequency analysis, application of techniques contained in the "Guidelines for Determining Flood Flow Frequency," Bulletin 17B, and application of the computer program Flood Frequency Analysis (HEC-FFA). The course is intended for engineers, hydrologists, and others involved in developing discharge-frequency estimates at gaged locations.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: Selected 0800, 1300, and 1500; (b) Grade: GS-07 or above. Course nominees should be engineers who perform professional work in the fields of hydrology and hydraulics. Nominees should have one or more years of experience in these areas. It is required that course participants be in positions where, in the next year or two, they will be involved in developing frequency curves, performing regional analysis, or determining generalized skew coefficients.

Session	Location	Date
2001-1	Davis, CA	10/23/2000 10/27/2000

### FLOOD WARN PREP PROG

**Long Title:** *Flood Warning/Preparedness Programs*

**345**                      **Length: 36 Hours**                      **35FWP01A**

**Purpose.** This course provides participants with an understanding of Flood Warning/Preparedness Programs and the technical requirements for planning, designing, and implementing these systems. The course emphasizes the roles and responsibilities of local, state, and federal agencies and includes presentation of several case examples.

**Description.** Flood Warning/Emergency Preparedness Programs are emerging as an important response to flood threat. The programs often are an integrated federal/state/local set of activities tailored to a specific local community situation. The role of the Corps continues to grow in this area.

The course offers opportunities to professional staff in flood plain management, hydraulics and hydrology, emergency operations, and civil works planning studies to become knowledgeable in this area.

Through lectures and workshops, students explore topics on (a) flood warning/preparedness programs overview; (b) roles of the National Weather Service, the Federal Emergency Management Agency, and others; (c) flood threat recognition systems; (d) data collection and management; (e) warning dissemination and emergency response; (f) Corps emergency operations; (g) plan formulation and evaluation; (h) FPMs

Program and flood preparedness; (i) implementation of flood preparedness programs; (j) private sector activities; and (k) many case examples.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: Selected 0000-0100, 0800, and 1300; (b) Grade: GS-7 or above; (c) a current or projected assignment in formulating/evaluating Flood Warning/Preparedness Programs.

### FUND OF GROUTING

**Long Title:** *Fundamentals of Grouting*

**217**                      **Length: 40 Hours**                      **35FGR01A**  
**CEUs: 0.0**                      **Tuition: \$2,600.00**

**Purpose.** This course provides engineers, geologists, and field inspection personnel with the latest CE and industry methodology to plan, implement, and evaluate grouting projects; to enhance understanding of methods, mechanics, and products available; and to evaluate requirements and adequacies of various aspects of these fields.

**Description.** Topics include (a) basic geotechnical concepts, (b) geologic site investigation for grouting, (c) principles of cement grouting in rock, (d) cement grouting equipment, (e) techniques in cement grouting, (f) compaction grouting and leveling of structures, (g) chemical grouting and site improvement, and (h) micro-fine cement and grouting.

**Prerequisites.** Nominees must be assigned Occupational Series: selected 0800 and 1350 and engineering technicians assigned to major construction projects. \*4.0 Continuing Education Units are offered by the University of Florida for this course.

Session	Location	Date
2001-1	TBD	TBD

### FUND WETLANDS

**Long Title:** *Fundamentals of Wetlands Ecology*

**272**                      **Length: 36 Hours**                      **33WET01A**  
**CEUs: 2.3**                      **Tuition: \$1,890.00**

**Purpose.** The restoration of fish and wildlife habitat and other wetland functions is a high priority project purpose in the civil works program. Wetlands typically comprise a major portion of the fish and wildlife habitat restoration projects currently being planned by Corps districts. However, additional wetland functions such as improvement of water quality are becoming increasingly recognized for their importance in many Corps' programs. Corps personnel who have no, or only limited, experience or education with wetland ecosystems need to know the fundamental concepts of wetlands science and management. This course provides an introduction and overview of basic wetland ecological concepts and principles in the context of planning and operating civil works environmental and



mitigation projects.

**Description.** Students are provided with state-of-the-art basic knowledge of wetland flora and fauna, hydrology, soils, and ecology. The course emphasizes wetlands functions and values in an ecosystem perspective. Both saltwater and freshwater wetlands will be addressed in the course. The relationship of wetlands to adjacent terrestrial and deep water habitats, along with wetlands succession and dynamics, are discussed. This course provides the base working level fundamentals in the wetlands ecology area and may also serve to update students in current developments in wetlands science. While the focus of this course is not on wetlands delineation or regulatory (Section 404) issues, regulatory personnel would benefit from the broader overview of wetlands ecology.

This course provides instruction in the following topics: (a) wetland hydrology; (b) wetland vegetation; (c) major faunal populations associated with wetlands; (d) wetland plant and animal communities, ecosystem relationships, and dynamic processes; (e) hydric soils; (f) wetland classification systems, including the relationship of such wetland classifications to ecosystems classifications and parameters; (g) principles of wetlands ecology and dynamics; (h) current research in wetlands; (i) evaluation of wetland functions; (j) overview of wetland development, restoration, and constructed wetlands; and (k) open discussion and problem solving.

**Prerequisites.** Nominees must be: Occupational Series: 0025, 0028, 0100, 0400, 0800, and 1300; Grade: GS-07 and above.

Session	Location	Date
2001-1	Annapolis, MD	6/4/2001 6/8/2001
2001-2	Olympia, WA	8/6/2001 8/10/2001

### GENERAL CONST—QV

**Long Title: Quality Verification: General Construction**

**054 Length: 37 Hours 35GCQ01A**  
**CEUs: 3.3 Tuition: \$730.00**

**Purpose.** This course provides the participant with the basic technical knowledge required to verify all elements of building construction, based on guide specifications, and to identify the quality assurance representative's role as it relates to construction quality management.

**Description.** Through lectures, conferences, and case study sessions, the course covers the subjects of concrete and masonry, safety, exterior and interior electrical systems and components, heating, air-conditioning, plumbing, ventilation, interior and exterior finishes, structural steel and welding, mechanical insulation, sheet metal work, site utilities, soils and compaction, and roofing. An account of the purpose, meaning, and acceptance of contract quality control is

included in the session on procedures for monitoring the construction quality management program. The course is directed toward proper and effective quality assurance verification of building construction.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: 0801, 0802, 0808, 0809, 0810, 0830, and 0850; (b) Grade: GS-05 or above. Students should have a current or projected assignment as a general quality assurance representative, construction representative, technician, or engineer, with quality assurance responsibilities. The fact that this course is oriented to building construction should be weighed when nominating a civil works candidate. Candidates must not have attended this or similar course within the past 5 years.

**Notes.** This course contains requirements which are mandatory for course completion and may require an estimated 1 hour of overtime. It is your responsibility to bring this to the attention of your supervisor so that an overtime request can be made by your appropriate personnel. It is also your responsibility to certify the amount of time expended on these requirements to your supervisor when you request overtime compensation.

Session	Location	Date
2001-1	Virginia Beach, VA	10/16/2000 10/20/2000
2001-2	Albuquerque, NM	2/26/2001 3/2/2001

### GISINTERMEDIATE

**Long Title: GIS Intermediate**

**167 Length: 24 Hours 54GII01A**  
**CEUs: 0.0 Tuition: \$1,510.00**

**Purpose.** This course provides students who already have basic GIS knowledge with more advanced GIS concepts and issues. The class uses a single data set to reinforce class instruction during a series of hands-on laboratory exercises.

**Description.** This instruction is designed to provide knowledge of the use of advanced GIS concepts. Specific issues addressed: (a) Data Base Design. What are the best ways to create databases to solve specific problems, avoiding the need to redesign later to rectify deficiencies; (b) Advanced Analytical Methods. Processing methods beyond basic boolean overlay and map algebra will be considered for environmental, water control, and land management applications; and (c) Error. Error types, calculation, and issues related to propagation of error during analysis will be considered. (d) Presentation of Results. Key elements of cartographic presentation are discussed in the context of the preparation of effective GIS maps.

**Prerequisites.** Students shall have previous instruction or job-related experience in the use of GIS. Nominees should be assigned (a) Occupational Series: 0020-0029, 0100-0199, 0400-0499, 0800-0899, 1170, and 1300-1399; (b) Grade: GS-07 or above.



<u>Session</u>	<u>Location</u>	<u>Date</u>
2001-1	Hanover, NH	6/4/2001 6/7/2001
2001-2	Hanover, NH	6/25/2001 6/28/2001

### GISINTRODUCTION

**Long Title:** *Geographic Information Systems (GIS) Introduction*

**205**                      **Length: 36 Hours**                      **54GIS01A**  
**CEUs: 2.2**    **Tuition: \$1,380.00**

**Purpose.** This course provides introductory instruction on the use of GIS software/hardware and various data sources to analyze Corps project operations and support decision making.

**Description.** Instruction is designed to introduce students to the concept of GIS as an integrator of geospatial data and analysis tool emphasizing emergency management, natural resource and environmental applications. Topics include (a) concept and operation of GIS, data entry, storage, display, output; (b) geospatial data structures and advantages of different data structures; (c) compatibility issues; (d) analysis, modeling, QA/QC; (e) how to select a GIS; and (f) related USACE and Federal policies and standards.

**Prerequisites.** Nominees should be assigned (a) as engineers, planners, biologists, foresters, or surveyors who use digital data to map or analyze projects; (b) Occupational Series: 0020-0029, 0100-0199, 0400-0499, 0800-0899, 1170, and 1300-1399; (c) Grade: GS-07 or above; (d) those whose job responsibilities include the analysis of spatial data and the use of digital data to map or manage Corps projects will find this course useful.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2001-1	Hanover, NH	4/2/2001 4/6/2001
2001-2	Hanover, NH	4/23/2001 4/27/2001
2001-3	Hanover, NH	5/7/2001 5/11/2001
2001-4	Hanover, NH	5/21/2001 5/25/2001
2001-5	Hanover, NH	6/11/2001 6/15/2001

### GIS-HYDROLOGIC ENGR

**Long Title:** *Hydrologic Engineering Applications for Geographic Information Systems*

**219**                      **Length: 36 Hours**                      **35GIS01A**  
**CEUs: 0.0**    **Tuition: \$1,680.00**

**Purpose.** This course provides the basic skills to utilize a Geographic Information System (GIS) to develop data and display results for hydrologic and hydraulic engineering analysis.

**Description.** This course provides information in lectures and workshops on: (a) GIS concepts and their application in H&H analysis; (b) acquisition of GIS data sets; (c) the National Geospatial Data Clearinghouse, and Corps of Engineers policies on geospatial data and systems; (d) use of GIS data sets and Arc/View with the HEC-HMS for hydrologic analysis and HEC-RAS for

river hydraulics; (e) combining H&H results with GIS data sets for flood analysis and planning; and (f) case studies of GIS application in H&H analysis, feasibility studies, and water control.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: selected 0028, 0029, 0800, and 1300; (b) Grade: GS-07 or above. Some prior experience or GIS training (such as PROSPECT Introduction to GIS) is recommended. Arc/Info application experience would be desirable. Student should be in a position to apply GIS methods in the near future.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2001-1	Davis, CA	12/4/2000 12/8/2000

### GPS/GIS APPLICATIONS

**Long Title:** *Global Positioning System (GPS): Practical Applications for Facility Management Geographic Information System (GIS) Development*

**187**                      **Length: 36 Hours**                      **35GOV01A**  
**CEUs: 2.8**    **Tuition: \$1,330.00**

**Purpose.** This course provides participants with a knowledge of the techniques for integrating field GPS spatial data into CADD/GIS/AM/FM databases. Functional elements supported by this course include: surveying, engineering, construction, navigation, master planning, and facility management.

**Description.** This course covers GPS/GIS using the Spatial Data Standards principles and applications; related cost factors; CADD/GIS database development; absolute and differential modes; survey applications and procedures; and GPS data collection, reduction, accuracy, and analysis using commercial data bases and GIS software.

**Prerequisites.** The course is intended for military and civil functional elements involved with facility management, surveying, construction, navigation, mapping, real estate, FM, GIS, etc. Hands-on computer experience required for this course. The course is intended for both professional and technical level classifications. It is open to all grades/series with GPS/GIS responsibilities.

\* For a more in-depth GPS Survey Course, see Survey IV. For a more in-depth GIS course, see Geographic Information Systems (GIS) Introduction.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2001-1	Vicksburg, MS	3/26/2001 3/30/2001
2001-2	Vicksburg, MS	9/10/2001 9/14/2001

### GROUNDWATER HYDRO

**Long Title:** *Groundwater Hydrology*

**124**                      **Length: 36 Hours**                      **35GWH01A**  
**CEUs: 0.0**    **Tuition: \$1,870.00**

**Purpose.** This course provides concepts, procedures,



and techniques employed in the analysis, investigation, and management of groundwater hydrology problems.

**Description.** The course focuses on applied groundwater hydrology for the purpose of planning and evaluation. Topics include the occurrence and movement of groundwater, well hydraulics, site characterization surface and groundwater interaction (and groundwater modeling). Hand methods and computer techniques are presented as methods of analysis.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: Selected 0810 and 1300; (b) Grade: GS-07 or above. A basic level of understanding is required in hydrology, hydraulics, and geology. One or more years of professional work experience in hydraulics, hydrology, geology/foundations, or water resources planning meets this basic level of understanding. In addition, course participants must be in positions or anticipate being in positions where they will be involved in groundwater studies within the next year or two.

Session	Location	Date
2001-1	Davis, CA	6/4/2001 6/8/2001

## GROUNDWATER MODELING

**Long Title:** *Groundwater Modeling*

**108**                      **Length: 36 Hours**                      **54GRM01A**

**Purpose.** This course provides the student with an understanding in the conceptualization, construction, and application of computer models in the simulation of groundwater flow. This course will serve as an introduction for Corps personnel interested in hands-on applications. Additionally, project managers in an oversight role will be provided with an enhanced understanding of the development, application, and limitations of computer models of groundwater flow.

**Description.** Computer models of groundwater flow are applied to a wide variety of projects within the Corps of Engineers. This includes HTRW clean-up, water resource management, channel design, salt-water intrusion, interaction between surface water and groundwater, reservoir design and operation, and watershed management. The course focuses on the development and application of computer models for the purpose of planning, design, operation, and evaluation. Topics include: site characterization and conceptual model development, integration of data into a computer model, selection of boundary conditions, model calibration, model application, common errors in computer modeling, and limitations of computer modeling. The industry-standard U.S. Geological Survey finite-difference three-dimensional groundwater flow model MODFLOW will be introduced to course participants through lectures and computer workshops. A companion particle-tracking computer program MODPATH will also be introduced. Workshops will give students an understanding of MODFLOW file structure, application experience, and output analysis. The Department of

Defense Groundwater Modeling System will be introduced as a preprocessor for more complex applications. Participants will be provided with a course binder, documentation for MODFLOW, and a set of example problems and solutions for use of MODFLOW. Additionally, all Department of Defense (including Corps of Engineers) employees will be provided with documentation and downloading instructions for the Groundwater Modeling System (GMS).

**Prerequisites.** Nominees must be (a) assigned to Occupational Series 0400, 0800, or 1300 series personnel; and (b) Grade GS-07 or above. A basic level of understanding of hydrogeology is required. Completion of the PROSPECT course entitled "Groundwater Hydrology" meets this requirement. In addition, course participants must be in positions, or anticipate being in positions where they will be involved in groundwater related studies within the next year or two.

## HISTORIC STRUCTURES I

**Long Title:** *Historic Structures: Maintenance and Repair*

**392**                      **Length: 36 Hours**                      **35HIS01A**  
**CEUs: 2.8**                      **Tuition: \$1,690.00**

**Purpose.** This course provides an awareness of the unique characteristics, legal requirements, procedures, technical knowledge, and skills necessary to administer, maintain and repair historic properties of the Federal Government.

**Description.** Guidance: Laws, Regulations, Secretary of the Interior's Standards, and Criteria and Guidance. Identification and Documentation of Historic Fabric Maintenance Issues: Inspection and Diagnostics, Maintenance Types and Cost, and Execution of Minor Maintenance and Repair. Design Issues: Exterior Finishes, Interiors, Life Safety and Accessibility, Seismic Design, Historic Landscape Preservation, Material Life Cycle Value, and Energy Conservation and Engineering Support Systems. Procedures: Design, Procurement, Execution - Treatment Issues. Field Trip: Treatment Techniques. Making Choices: Case Studies in Interpreting Preservation Guidelines.

**Prerequisites.** Nominees should be assigned (a) Occupational Series: 0020, 0023, 0025, 0028, 0170, 0193, 0301, 0341, 0342, 0343, 0401, 0408, 0800, 1005, 1008, 1170, 1171, 1173, 1176, 1300, 1301, 1640, 1910, 1960, or other series with cultural resource responsibilities; (b) Grade: GS-07, WG-11, E-6, O-1, or above. Attendees should have a minimum of one year experience in their organization prior to attending this course. Each session will attempt to approximate a mix between installation and USACE personnel. Typical USACE functions appropriate to this course include engineering, project management, construction, contracting, and real estate. Typical installation functions include engineering plans and services, family housing, operations and maintenance, engineering resource management, and environment.



**Notes.** This course requires completion of all class activities to receive a certificate. Approximately 2 hours of overtime may be required to complete the field trip on day four. The student is responsible for bringing this to the attention of his/her supervisor so that an overtime request/determination can be made prior to course attendance. Certification of the amount of time expended on these requirements to supervisors, when requesting overtime compensation, is also the student's responsibility.

**MANDATORY.** Slide Show Information: Each course participant is required to bring with them no more than three (3) 35mm slides. The slides are used in an introduction session Monday morning. Each participant will be asked to say a few words from their seats about the images. Slides should represent a participant's involvement with historic preservation on their respective installations. Examples might include past projects, success stories, or problems areas. This is a networking and ice breaking activity. Hand in slides at registration Sunday evening or first thing Monday morning before session begins.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2001-1	Seattle, WA	3/19/2001 3/23/2001

## HISTORIC STRUCTURES II

**Long Title:** *Historic Structures: Craft Skills Training*

**163**                      **Length: 36 Hours**                      **35HS201A**  
**CEUs: 2.5**                      **Tuition: \$1,540.00**

**Purpose.** This course provides craft skill training for technicians and constructions inspectors involved with maintenance, preservation, and rehabilitation of historic structures. Skills training is best offered in the context of craft enhancement, identification of historic fabric, and application of craft skills to the special needs of historic preservation in the Federal government.

**Description.** This course provides twelve hours of classroom training on the following subjects: (a) Secretary of the Interior Standards and Guidelines; (b) Levels of treatment; (c) Character defining features; (d) Preservation of historic fabric, Repair versus Replacement; (e) Tools and tool marks; (f) Deterioration of roofing and flashing, paint, wood, and masonry (causes and cures);

This course also provides twenty-four hours of skills training. This is a 3-day field exercise working with and taught by experienced craftsmen on an actual and ongoing historic preservation project. Field groups are assigned in the three speciality areas of carpentry, painting, and masonry.

Classroom training utilizes slides, power point presentations, video tape, and viewgraphs. Craftsmen are requested to bring work clothes and tools to the course to facilitate the work exercise training.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: GS: 0800, 1910, 1960; WG: 3603, 3605, 3706, 4102, 4604, 4605, 4607, 4618, 4749, and 5318; (b) Grade: GS-07 , WG-11, E-6, O-1 or above. Attendees should have a minimum of one year experience in their organization prior to attending the course. Typical installation functions include family housing maintenance and DEH/DPW operations and maintenance. Typical USACE functions include design specifications and construction inspection.

**MANDATORY.** Slide Show Information: Each course participant is required to bring with them no more than three (3) 35mm slides. The slides are used in an introduction session Monday morning. Participants are asked to say a few words from their seats about the images. Slides should represent a participant's involvement with historic preservation on their respective installations. Examples might include past projects, success stories, or problem areas. This is a networking and ice breaking activity. Hand in slides at registration Sunday evening or first thing Monday morning before session begins.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2001-1	Washington, DC	4/23/2001 4/27/2001

## HTRW CERCLA/RCRA

**Long Title: Hazardous/Toxic and Radioactive Waste (HTRW) CERCLA and RCRA Remediation Process Course**

**356**                      **Length: 28 Hours**                      **33HEL01A**  
**CEUs: 2.1**                      **Tuition: \$870.00**

**Purpose.** This course trains personnel on the Comprehensive, Environmental Response, Compensation and Liability Act of 1980 (CERCLA) hazardous substance response process and the Resource Conservation and Recovery Act of 1976 (RCRA) corrective action process as it relates to USACE programs such as the Installation Restoration Program (IRP), the Superfund Program, the Formerly Used Defense Sites (FUDS) Program, the Base Realignment and Closure (BRAC) Program, and the Formerly Used Sites Remedial Action Program (FUSRAP), and the Civil Works Hazardous, Toxic, and Radioactive Waste (HTRW) Remediation program.

**Description.** This course has been developed by in-house USACE staff and focuses on the regulatory requirements for cleaning up HTRW at CERCLA and RCRA sites under various programs. It covers the CERCLA process as outlined by Subpart E of the National Contingency Plan and the RCRA corrective action process as implemented via permit requirements and regulatory provisions. CERCLA topics addressed include preliminary assessments, site inspections, removal site evaluations, engineering evaluations/cost analyses, removal actions, remedial investigations, feasibility studies, proposed plans, records of decision, remedial design and construction, and public participation requirements. RCRA topics in-



clude RCRA Facility Assessments, RCRA Facility Investigations, Interior/Stabilization Measures, Corrective Measures Studies, Corrective Measures Implementation, corrective action management units, temporary units, staging piles, and use of remedial action plans in lieu of traditional RCRA permits.

In addition to the CERCLA/RCRA course, individual two day workshops on the CERCLA or RCRA process can be tailored to meet your individual district's needs. Whether you are interested in an onsite CERCLA/RCRA process course or a separate course featuring either the CERCLA or the RCRA process, contact the USACE Professional Development Support Center, Huntsville, AL.

**Prerequisites.** Nominees must have at least one year experience in the hazardous, toxic, or radioactive waste program. Priority will be given to personnel directly involved in the USACE HTRW program in the following occupational series: 800 series Engineers (0801, 0819, 0830, 0893, 0896, etc); Environmental Protection Specialist (0028); Program Managers, Engineering and Science (0340); Industrial Hygienists (0690); Geologists/hydrologist (1350, 1315); and Chemists (1320); Grade: GS-9 or above.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2001-1	Minneapolis, MN	6/5/2001 6/8/2001

### HTRW CONST INSP

**Long Title: Hazardous/Toxic and Radioactive Waste Construction Inspection**

**141 Length: 36 Hours 56HC101A**  
**CEUs: 2.7 Tuition: \$1,190.00**

**Purpose.** This course is for working level and management personnel having responsibilities in the USACE Superfund, DERP, and other Hazardous, Toxic, and Radioactive Waste (HTRW) programs. It provides a comprehensive overview of responsibilities and acceptable work practices for Quality Assurance Representatives (QAR) and supervisors on HTRW construction sites. The course provides information to allow the QAR to effectively perform his job in determining if contract work performed, testing, etc., complies with relevant federal, state, and local standards and with the contract documents. This course focuses on QAR activities beginning with Biddability, Constructibility, Operability (BCOE) reviews; through mobilization and preconstruction; construction activities; final cleanup/demobilization; and operation and maintenance (O&M).

**Description.** Through lectures, lessons learned, and case studies, this course provides instruction in the following areas: (a) environmental laws and regulations; (b) field monitoring activities including Chemical Data Quality Management, removal containment, and treatment systems; (c) overview of removal, containment, and treatment systems technologies, including surface water control, collection and injection of groundwater, excavation/on-site treatment of soil, collection

and disposal of wastes, underground storage tank management, and soils and geotextiles; (d) sampling and testing procedures, interpretation of test results; and (e) health and safety in field activities including work practices to minimize risks for both on-site and off-site personnel and site-specific safety and health plans.

**Prerequisites.** This course is for working level and management personnel with a current or projected assignment in the USACE HTRW program.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2001-1	Philadelphia, PA	4/30/2001 5/4/2001

### HTRW ENV SAMPLING

**Long Title: Hazardous/Toxic and Radioactive Waste Environmental Sampling**

**225 Length: 28 Hours 33ESA01A**  
**CEUs: 3.3 Tuition: \$990.00**

**Purpose.** This course provides students the knowledge and skills necessary to plan and conduct sampling for site characterization and remediation monitoring at hazardous, toxic, and radioactive waste (HTRW) sites. In addition, the students will receive guidance on managing and determining usability of data generated by site characterization and monitoring activities.

**Description.** The course describes the chemistry and behavior of contaminants typically found at HTRW sites, project planning concepts including preparation of sampling and analysis plans, sampling of soil gas, field analytical techniques, geophysical techniques applicable to HTRW sites, soil sampling, surface water and sediment sampling, monitoring well installation, ground water sampling, pump/slug testing, air sampling, investigation-derived waste disposal, statistical analysis of data, sample packaging and shipping, evaluation of data usability and quality, use of geographic information systems, and QA oversight of contractors performing this type of work. The course is carefully coordinated with existing USACE and EPA guidance and includes demonstrations of some of the sampling techniques.

**Prerequisites.** Nominees must be assigned to selected series 0800 (e.g., 0810 Civil Engineer or 0819 Environmental Engineer), 1300 (e.g., 1350 Geologist or 1320 Chemist), 0690, 0698, 0028, or be working as a project manager for HTRW projects and be in grade GS-5 or above. Students should have a current or projected assignment related to HTRW projects.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2001-1	Huntsville, AL	4/16/2001 4/20/2001



## HTRW OVERVIEW

**Long Title: Hazardous/Toxic and Radioactive Waste Overview**

**350**                      **Length: 20 Hours**                      **56HTR01A**  
**CEUs: 1.1**                      **Tuition: \$650.00**

**Purpose.** This is an introductory course for staff level and management personnel having responsibilities in USACE Superfund, DERP, and other Hazardous/Toxic and Radioactive Waste (HTRW) programs. This course provides an overview of information concerning the Corps' role in HTRW cleanup activities under these programs.

**Description.** The course consists of classroom/instruction summarizing USACE HTRW programs such as Superfund, Defense Environmental Restoration Program (i.e., Installation Restoration, Formerly Used Defense Sites) Base Realignment and Closure (BRAC), and Support for Other Programs. The course addresses the Corps' HTRW organizational structure, HTRW project execution and management, contracting strategies, applicable environmental laws and regulations, community relations, ordnance and explosive wastes, risk assessment, health and safety, site characterization, environmental monitoring, cost engineering, UST projects, geotechnical and treatment design technologies, and lessons learned.

**Prerequisites.** This overview course is intended as an introductory course for staff level and management personnel with a current or projected assignment in the USACE HTRW programs. This course does not satisfy the Health & Safety training requirements under OSHA 29 CFR 1910.120/29 CFR 1926.65.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2001-1	Omaha, NE	5/22/2001 5/24/2001

## HTRW RA COST REIMB

**Long Title: Hazardous/Toxic and Radioactive Waste (HTRW) Remedial Action Cost-Reimbursement Training Workshop**

**428**                  **Length: 20 Hours**                  **56CRS01A**  
**CEUs: 0.0**                                      **Tuition: \$480.00**

**Purpose.** This seminar is intended to: (a) provide practical guidance on how to manage HTRW Cost-Reimbursement contracts/delivery orders; (b) be presented at the start up of the contract/delivery orders; and (c) accommodate requests for training on short notice at your onsite location. Classroom instruction includes actual case examples, lessons learned, and application of contract/task order management fundamentals.

**Description.** Topics to be covered include: (a) Cost Reimbursement vs. Fixed Price Contracting; (b) Contract/Task Order Management Fundamentals: (1) PreAward Involvement, (2) Indefinite Task Order, (3)

Task Order/Contract Issuance, (4) Pre Performance Meeting, (5) Contract/Task Order Baseline, (6) Authorization to Proceed, (7) Differing Roles in Execution, (8) Reporting and Control, (9) Baseline/Modification Management, (10) Fee (Fixed, Award, Incentive), (11) Subcontract/Procurement Review, (12) Property Management, (13) Payment/Invoice Review, (14) Quality Management, (15) SB/SDB/Local Subcontracting, and (16) Closeout; (c) Using Sound Business Judgement; (d) Teaming/Communications; and (e) Documentation.

**Prerequisites.** This seminar should be taken by persons who are: (a) actively engaged in the management/administration of a current or future cost-reimbursement contract/task order; and (b) a member of a start-up team for a cost-reimbursement contract/task order. It is recommended that nominees complete the PROSPECT course “Preparation and Management of Cost-Reimbursement Construction Contracts” prior to attending this workshop.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2001-1	Huntsville, AL	9/11/2001 9/13/2001

## HTRW RISK ASSESSMENT

**Long Title: Hazardous/Toxic and Radioactive Waste Sites Risk Assessment**

**222**                      **Length: 36 Hours**                      **56RAS01A**  
**CEUs: 3.4**                      **Tuition: \$1,050.00**

**Purpose.** This course provides students with the details of risk assessment principles, requirements, and calculations from the USACE hazardous/toxic and radioactive waste (HTRW) program perspective for projects regulated under the Comprehensive Environmental Response Compensation & Liability Act (CERCLA) and the Resource Conservation & Recovery Act (RCRA). The course stresses concepts of land planning analysis to support risk assessment future use scenarios, the importance of the uncertainty analysis and development of the risk range, and options in developing exposure scenarios.

**Description.** Topics presented in lectures and case studies include (a) concept of risk assessment and good science versus policy considerations; (b) project planning and scoping the risk assessment; (c) evaluation of the baseline risk assessment and all of its components; (d) Ecological Risk Assessment; and (e) Risk Assessment in FUSRAP.

NOTE: The class has recently been updated to provide current ecological risk assessment procedures and guidance, and applications for FUSRAP. This is not an introductory course, but rather a detailed analysis of risk assessment. This course is a companion to the HTRW Risk Management and Decision-Making course intended for managers. A calculator with engineering functions is needed for this course.

**Prerequisites.** Nominees should include (a) target audience: environmental scientists, chemists, geolo-



gists, industrial hygienists, and/or those technical disciplines responsible for scope review and/or preparation of the risk assessment; (b) Grade: GS-07 and above; (c) other: science background which preferably includes chemistry, biology, mathematics, and toxicology. Students should have completed the HTRW Overview course and the HTRW CERCLA/RCRA course (or equivalent training) and have actual experience with HTRW projects.

Session	Location	Date
2001-1	Jacksonville, FL	6/11/2001 6/15/2001

### HTRW RISK MANAGEMENT

**Long Title:** *Hazardous/Toxic and Radioactive Waste Risk Management and Decision-Making*

221	Length: 20 Hours	56RMD01A
CEUs: 1.9		Tuition: \$720.00

**Purpose.** This course gives hazardous, toxic, and radioactive waste (HTRW) project managers and technical team members an overview and fundamental principles of risk assessment. The course will address how information from the risk assessment is used with other factors such as stakeholders and regulator considerations to make risk management decisions for HTRW projects.

**Description.** This course will describe concepts, and discuss options for risk management decision-making in the HTRW program. Topics presented through lecture and case studies include: a) decision points for each phase of an HTRW project; b) an overview of the risk assessment process (human health, ecological and radiological) and how this information is used on HTRW projects; c) uncertainties commonly associated with risk assessments and their consideration in risk management; d) use of risk assessment results and regulatory factors in developing cleanup levels; e) risk mitigation and alternative analysis; f) consideration of land use, societal factors, regulator and stakeholder input in making remedial action decisions; g) cost benefit analysis; and h) DoD policy and statutory requirements.

**Prerequisites.** Students should include project managers and technical support disciplines who are responsible for making and/or supporting project decision-making using risk assessments. Students should have completed the HTRW Overview course and HTRW CERCLA/RCRA course.

Session	Location	Date
2001-1	Kansas City, MO	4/3/2001 4/5/2001

**NEW**

### HTW REMED TECH-CONTAIN

**Long Title:** *HTW Remediation Technologies - Containment*

337	Length: 20 Hours	35HRC01A
CEUs: 0.0		Tuition: \$680.00

**Purpose.** This course provides the student with a workable understanding of waste containment technologies. The information is intended for use by geologists, geotechnical/chemical/mechanical/environmental/civil engineers, chemists, and other professionals involved in project planning, technology selection, design, and/or remedy operation/optimization for in-house projects or oversight of contractor efforts on hazardous and toxic waste sites.

**Description.** This course provides detailed technical information on the containment technologies listed below. The course also discusses characterization needs, full-scale design approaches, operational considerations, and close out approaches for these containment technologies. Concepts are conveyed through lectures, case studies, class problems, and a class trip to Rocky Mountain Arsenal. The technologies covered include: Landfill Covers, Landfill Lines, Solidification/Stabilization, Ground Water Collection Trenches, Ground Water Cut-Off Walls, Permeable Reaction Walls, Landfarming, and Composting. The course emphasizes the awareness and use of available guidance from the USACE, EPA, Air Force, ASTM and other sources.

**NOTE:** This course can be taken by itself or as part of the 36 hour course #395 which combines both Course #371, HTW Remediation Technologies-In situ and Course #337, HTW Remediation Technologies-Containment.

**Prerequisites.** Nominees should be in occupational series 1300 or 0800 or working as an Environmental Protection Specialist or Project/Technical Manager on remediation projects. Nominees must be in grades GS-5 or higher. Courses in soils, hydrogeology, and chemistry would be helpful, but are not necessary.

Session	Location	Date
2001-1	Denver, CO	4/9/2001 4/11/2001

**NEW**

### HTW REMED TECH-INSITU

**Long Title:** *HTW Remediation Technologies - Insitu*

371	Length: 20 Hours	35HRI01A
CEUs: 0.0		Tuition: \$680.00

**Purpose.** This course provides the student with a workable understanding of various in-situ remediation technologies. The information is intended for use by geologists, geotechnical/chemical/mechanical/envi-



ronmental/civil engineers, chemists, and other professionals involved in project planning, technology selection, design, and/or remedy operation/optimization for in-house projects or oversight of contractor efforts on hazardous and toxic waste sites.

**Description.** This course offers a description of the underlying processes, site characterization needs, pilot test design, full-scale design approaches, operational considerations, and close out approaches for several in-situ remediation technologies. Concepts are conveyed through lecture, case studies, class problems, and a class trip to Rocky Mountain Arsenal. The technologies covered include: Ground Water Extraction, Soil Vapor Extraction, Multi-Phase Extraction and Fuel Recovery, In-Situ Air Sparging, Natural Attenuation and In-Situ Bioremediation, and other Innovative Technologies such as: In-Situ Thermal Treatment, In-Situ Chemical Oxidation, Surfactant/Co-Solvent Soil Flushing, Electrokinesis. The course emphasizes the awareness and use of available guidance from the USACE, EPA, Air Force, ASTM and other sources.

**Prerequisites.** Nominees should be within occupational series 1300 or 0800 or working as an Environmental Protection Specialist or Project/Technical Manager on remediation projects. Nominees must be in grades GS-5 or higher. Courses in soils, hydrogeology, and/or chemistry would be helpful, but are not necessary.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2001-1	Denver, CO	4/11/2001 4/13/2001

### HTW REMEDIATION TECHNOLOGIES

**Long Title: HTW Remediation Technologies**

**395 Length: 36 Hours 35GHS01A**  
**CEUs: 2.9 Tuition: \$1,250.00**

**Purpose.** This course provides the student with a workable understanding of various in-situ remediation and containment technologies. The information is intended for use by geologists, geotechnical/chemical/mechanical/environmental/civil engineers, chemists, and other professionals involved in project planning, technology selection, design, and/or remedy operation/optimization for in-house projects or oversight of contractor efforts on hazardous and toxic waste sites.

**Description.** The course is a combination of Course #371, HTW Remediation Technologies - Insitu, and Course #337, HTW Remediation Technologies-Containment. The two shorter courses are taught back-to-back and the enrollee in this course would attend both in sequence. The two shorter courses share a common class trip to Rocky Mountain Arsenal. Refer to the descriptions of those two courses for more information. The course emphasizes the awareness and use of available guidance from the USACE, EPA, Air Force, ASTM, and other sources.

**Prerequisites.** Nominees should be within occupational series 1300 or 0800 series or working as an Environmental Protection Specialist or Project/Technical Manager on remediation projects. Nominees must be in grades GS-5 or higher. Courses in soils, hydrogeology, and/or chemistry would be helpful, but are not necessary.

NOTE: Portions of this course can also be taken separately as either the 20 hour course #371, HTW Remediation Technologies - Insitu, or the 20 hour course #337, HTW Remediation Technologies-Containment.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2001-1	Denver, CO	4/9/2001 4/13/2001

### HUMAN RESOURCE MGT I

**Long Title: Human Resource Management I - A Corps for the Future**

**301 Length: 36 Hours 21HR101A**  
**CEUs: 0.0 Tuition: \$690.00**

**Purpose.** This course is designed to improve human resource management skills of Corps of Engineers supervisors, managers, and team leaders. The focus of the course is on the development of communication skills. Students will also be administered an instrument that will identify individual behavioral styles used in human resource management.

The goal of the course is to promote optimal leadership of human resources. Each topic in the course provides tools supervisors, managers, and team leaders can use on the job.

**Description.** The course emphasizes a practical approach to problems supervisors, managers, and team leaders may encounter within each topic addressed. Additionally, some theory is also covered. Through lecture, discussion, and interactive exercises, participants will improve their human resource management skills.

Major topics include (a) Corps vision and values, (b) leadership, (c) empowering members to excel, (d) diversity, (e) matching people with jobs, (f) communications skills, and (g) managing stress. Actual course content may differ as HRM materials are updated.

HRM I answers the questions: "What skills and abilities do I need to meet the evolving missions of the Corps of Engineers for the future?" As the Army downsizes and as we "reinvent" government to increase efficiency and effectiveness, the Corps must find ways to recreate value for itself in the eyes of present and potential customers. That means, in large part, translating its skills and abilities into new directions.

HRM I stresses that quality service in government is not an oxymoron and that Corps managers and team leaders in districts and divisions are the ones who can



and should streamline processes, reduce inefficiencies, and increase effectiveness.

HRM I addresses how to motivate and influence - in effect, how to gain personal power - in a day when rank and status are fast disappearing and positional power eroding. How to move others to action is also addressed through effective communication skills. Finally, HRM I introduces the major stressor within the Corps today - managing organizational change - and identifies ways to reduce the "lack of control," which is the primary basis for this stressor. Our intent is to give participants relevant skills and abilities for the future to increase their professional and personal security.

**OBJECTIVES.** Upon successfully completing this training, attendees will be able to (a) identify methods of successful communication with employees, workgroups, and coworkers (including speaking and listening); (b) classify methods of recognizing employee performance informally, including giving positive and negative feedback; (c) list specific techniques for giving constructive criticism; (d) identify skills to look for when interviewing job applicants; (e) evaluate individual workloads to ensure balanced delegation of assignments; (f) understand elements of reasonable and effective work assignments; (g) compare individual progress with performance standards; (h) recognize basic elements of employee self-esteem; (i) identify basic principles of motivation; (j) explain basic principles of delegation of authority and accountability; (k) identify the Corps' value structure; (l) summarize basic dynamics of creativity and innovation; (m) identify basic interviewing techniques/employee selection; (n) identify basic elements of stress management and assertiveness techniques; (o) identify their own behavioral work style; and (p) understand the components of a positive and successful workplace environment.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: Any; (b) Grade: GS/GM 11-15 and wage grade supervisors, managers, and team leaders. First preference is given to formally designated supervisors, managers, and team leaders. Second preference is given to project managers and others likely to become supervisors.

**Notes.** (a) It is not necessary for students to take HRM courses in numeric order. Students may select any or all of the Human Resource Management courses in any order based solely upon subject matter need. (b) Only GS/GM 13-15s and high potential nonmanagers may use executive development funds to cover the cost of attendance. (c) This course requires active participation by all attendees. Attendees are expected to make travel plans to permit attendance at all class sessions.

Session	Location	Date
2001-1	Huntsville, AL	3/5/2001 3/9/2001
2001-2	Huntsville, AL	3/12/2001 3/16/2001
2001-3	Dallas/Ft. Worth, TX	4/9/2001 4/13/2001
2001-4	Huntsville, AL	4/23/2001 4/27/2001
2001-5	Albuquerque, NM	5/21/2001 5/25/2001
2001-6	Huntsville, AL	6/4/2001 6/8/2001
2001-7	Huntsville, AL	7/9/2001 7/13/2001

## HUMAN RESOUR MGT II

**Long Title: Human Resource Management II - Creating a Total Quality Culture**

**302** **Length: 36 Hours** **21HR201A**  
**CEUs: 0.0** **Tuition: \$740.00**

**Purpose.** This course is designed to improve human resource management skills of managers, supervisors, and team leaders within the Corps of Engineers. The course focuses on managing performance.

**Description.** The course includes topics on (a) leadership, (b) developing and appraising members' performance, (c) team building, and (d) transitions.

Each topic provides specific tools the manager, team leader, or supervisor can use. Actual course content may differ as HRM materials are updated.

HRM II is about changing structures, systems, and even culture to match the quality imperative and to ensure exceptional performance. The quality movement within the Corps is examined, with particular emphasis on continuous improvement, customer focus, total involvement of the workforce in that quality vision, and leadership.

Specific focus areas include measuring employee performance to ensure exceptional, not mediocre, performance; moving from a hierarchical to a team-oriented culture; formulating quality indicators (benchmarks) in all activities to complement the organization's vision on quality; transitioning from a status quo culture to a continuous improvement culture, by strongly emphasizing leadership.

**OBJECTIVES.** Upon successful completion of this training, attendees will be able to (a) demonstrate empathetic responses to employee problems; (b) demonstrate techniques for communicating needs to subordinates; (c) prepare effective written communication; (d) write performance standards; (e) prepare performance appraisals; (f) explain expectations for employee's performance; (g) explain relationship between performance appraisal and goal setting; (h) document employee performance (positive or negative) during the year; (i) discuss negative performance with employee; (j) identify team's ability to accomplish task; (k) compare methods for enhancing employee self-esteem; (l) identify individual employee talent; (m) identify basic strategies for team building; (n) identify team needs for successful task completion; (o) recog-



nize supervisory responsibility for team actions; (p) develop methods for inspiring confidence in the work group; and (q) design strategies for empowering team members.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: Any; (b) Grade: GS/GM 11-15 and wage grade supervisors and managers and team leaders. First preference is given to formally designated supervisors, managers and team leaders. Second preference is given to project managers and others likely to become supervisors

**Notes.** (a) It is not necessary for students to take Human Resource Management courses in numeric order. Students may select any or all of these courses in any order based solely upon subject matter need. (b) Only GS/GM 13-15's and high potential nonmanagers may use executive development funds to cover the cost of attendance. (c) This course requires active participation by all attendees. Attendees are expected to make travel plans to permit attendance at all class sessions.

Session	Location	Date
2001-1	Huntsville, AL	4/23/2001 4/27/2001
2001-2	Albuquerque, NM	6/18/2001 6/22/2001
2001-3	Norfolk, VA	6/25/2001 6/29/2001
2001-4	Huntsville, AL	7/30/2001 8/3/2001

### HUMAN RESOUR MGT III

**Long Title:** *Human Resource Management III - Empowerment in the Workplace*

**303** Length: 36 Hours 21HR301A  
CEUs: 0.0 Tuition: \$880.00

**Purpose.** This course is designed to give participants human resource management skills focusing on empowerment in the workplace.

**Description.** The course provides four different perspectives from which to view today's work: (a) empowerment and the Corps: shifting the paradigm; (b) empowerment and individual differences: honoring the self; (c) empowerment and diversity: developing the workplace of tomorrow; and (d) empowerment and delegation: skills for the 1990's. Each topic includes content, experience, and application sections to provide participants with specific tools to take back to the job.

**OBJECTIVES.** Upon successful completion of Human Resource Management III, participants will be able to: (a) identify the key components of empowerment; (b) understand the individual problem solving style and how it may impact others; (c) see how individual differences can become complementary strengths on a team; (d) identify current Corps paradigms and changes for the future; (e) see the relationship between empowerment and performance expectations, and (f) learn the process for effective delegation. Human Resources Management III focuses on individual development

which translates to organizational effectiveness through the use of the empowerment philosophy. The ultimate result of applying these principles is satisfied customers, both internally and externally. Therefore the primary goal of Human Resource Management III is to provide a new perspective in developing and maintaining productive, motivated employees and loyal customers.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: Any; (b) Grade: GS/GM 11-15 and wage grade supervisors, managers, and team leaders. First preference is given to formally designated supervisors, managers, and team leaders. Second preference is given to project managers and others likely to become supervisors.

**Notes.** (a) It is not necessary for students to take Human Resource Management courses in numeric order. Students may select any or all of these courses in any order based solely upon subject matter need. (b) Only GS/GM 13-15's and high potential nonmanagers may use executive development funds to cover the cost of attendance. (c) This course requires active participation by all attendees. Attendees are expected to make travel plans to permit attendance at all class sessions.

Session	Location	Date
2001-1	Huntsville, AL	4/9/2001 4/13/2001
2001-2	Albuquerque, NM	5/14/2001 5/18/2001
2001-3	Jacksonville, FL	6/11/2001 6/15/2001

### HUMAN RESOUR MGT IV

**Long Title:** *Human Resource Management IV - Vision, Values, Teamwork, and Leadership*

**034** Length: 36 Hours 21HR401A  
CEUs: 0.0 Tuition: \$880.00

**Purpose.** Human Resource Management IV is designed to present the organizational perspective of the Human Resource Management series. Human Resource Management IV looks at the Corps organization from four cornerstones: (a) visions; (b) values; (c) teamwork; and (d) leadership.

**Description.** Each topic addressed builds upon the previous days learning. The course is designed as a learning lab in which participants are assigned to a team at the beginning of the week and learn from an in-depth perspective how to move through team stages, modify leadership style, and clarify performance expectations. Human Resource Management IV is primarily a leadership seminar in which participants actively participate in each day's learning. Human Resource Management IV is a "cutting edge" course that enables participants to be part of a week-long learning experience.

**OBJECTIVES.** After successful completion of Human Resource Management IV participants will: (a) understand the relationship between organizational vision



and day-to-day actions; (b) identify and describe the primary values of the Corps; (c) understand the stages of group development; (d) use appropriate leadership behaviors with individuals and groups depending upon the situation; (e) develop a back-on-the-job coaching plan to apply concepts learned; and (f) work together in teams on a week long project that culminates on Friday with team presentations and insights about the team process.

Human Resource Management IV is a big picture perspective with enough specifics that participants have the tools to adopt the learning to their individual needs.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: Any; (b) Grade: GS/GM 11-15 and wage grade supervisors, managers, and team leaders. First preference is given to formally designated supervisors, managers, and team leaders. Second preference given to project managers and others likely to become supervisors.

**Notes.** (a) It is not necessary for students to take Human Resource Management courses in numeric order. Students may select any or all of these courses in any order based solely upon subject matter need. (b) Attendees are strongly encouraged to have either prior supervisory experience or prior supervisory/managerial training before taking this course. (c) Only GS/GM 13-15's and high potential nonmanagers may use executive development funds to cover the cost of attendance. (d) This course requires active participation by all attendees. Attendees are expected to make travel plans to permit attendance at all class sessions.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2001-1	Huntsville, AL	4/30/2001 5/4/2001
2001-2	Albuquerque, NM	5/21/2001 5/25/2001
2001-3	Jacksonville, FL	6/18/2001 6/22/2001

### **HVAC CTR SYS: DESIGN**

**Long Title: HVAC Control Systems: Design**

**340**                      **Length: 36 Hours**                      **35HVC01A**  
**CEUs: 3.1**    **Tuition: \$1,150.00**

**Purpose.** This course provides instruction to mechanical and electrical engineers in the design, specification, and construction of HVAC control systems using standard single loop or direct digital control panels and the appropriate guide specifications and technical instructions.

**Description.** This course provides the HVAC controls systems designer with the knowledge necessary to implement standardized control systems mandatory for Corps use. These control systems are based on high quality sensors, pneumatic or electric actuators, and standard panels using either single loop microprocessor-based or commercial direct digital control.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: 0830, 0850, and 0855; (b) Grade: GS-9 or above.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2001-1	Champaign, IL	3/19/2001 3/23/2001

### **HVAC CTRL SYS: O&M**

**Long Title: HVAC Control Systems: Operation and Maintenance**

**246**                      **Length: 36 Hours**                      **72HOM01A**  
**CEUs: 3.1**    **Tuition: \$1,120.00**

**Purpose.** This course provides instruction to building mechanics on the proper techniques for operating and maintaining standard HVAC control systems.

**Description.** Trainees are taught HVAC control theory, will be able to identify standard control systems and loops, will develop operational skills including sequences, controller configuration, and commissioning procedures, and will learn maintenance procedures to include lists of tools and spare parts, troubleshooting, and repair/replacement techniques.

**Prerequisites.** Nominees must be engaged in the operation and maintenance of HVAC systems and controls. Participants should have a fundamental knowledge of HVAC systems and basic control principles.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2001-1	Champaign, IL	4/23/2001 4/27/2001

### **HVAC CTRL SYS: QV**

**Long Title: HVAC Control Systems: Quality Verification**

**382**                      **Length: 36 Hours**                      **35HQV01A**  
**CEUs: 0.0**    **Tuition: \$1,200.00**

**Purpose.** This course provides an introduction to the Army standardized HVAC control systems and the procedures necessary to effectively perform quality assurance duties. The course is intended for construction representatives, engineering technicians, and engineers who have construction quality assurance assignments and for operation and maintenance personnel who are unfamiliar with Army standardized HVAC control systems.

**Description.** The course provides quality assurance personnel with the knowledge necessary to provide quality verification of the Army's new mandatory standardized HVAC control systems. These new standardized HVAC control systems are based on standardized sequences of operation and ladder diagrams, standardized control panels utilizing single loop microprocessor-based controllers, standardized high quality sensors, and standardized 4-20mA signal transmission.



**Prerequisites.** Nominees must be assigned (a) Occupational Series: 0801, 0802, 0809, 0810, 0830, 0850, 0855; (b) Grade: GS-09 or above. Students should have current or projected assignments as construction representatives or have mechanical or electrical quality verification responsibilities. Engineers are exempt from these eligibility requirements. Students should have previously completed mechanical quality verification courses or be familiar with HVAC systems and how they are controlled.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2001-1	Champaign, IL	4/30/2001 5/4/2001

## HVAC DESIGN: BASIC

**Long Title: HVAC Design: Basic**

**391**                      **Length: 36 Hours**                      **35BHV01A**  
**CEUs: 3.3**                      **Tuition: \$1,270.00**

**Purpose.** This course provides instruction on the fundamentals of HVAC design including appropriate Corps of Engineers criteria.

**Description.** This course presents topics on (a) heating and cooling load calculations; (b) psychrometrics; (c) duct design; (d) hydronic system design; (e) equipment selection; (f) sizing and layout; (g) criteria sources; and (h) indoor air quality.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: 0800 through 0855; (b) Grade: no limitations; (c) current or projected assignment as an HVAC design engineer or mechanical engineer with limited or no design experience. The course provides an overview of HVAC design for non-mechanical engineers.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2001-1	Seattle, WA	5/7/2001 5/11/2001

## HVACSYSTA&B-QV

**Long Title: HVAC Systems: Testing, Adjusting, & Balancing - QV**

068	Length: 36 Hours	35TAB01A
CEUs: 3.0		Tuition: \$1,230.00

**Purpose.** This course provides quality assurance personnel in the field with an understanding of HVAC systems functions and the testing, adjusting, and balancing relationships of the complete system.

**Description.** The course teaches the necessary skills and knowledge to evaluate system installation and system testing, adjusting, and balancing. The course includes a 2-day lab exercise that demonstrates technical material necessary for field technicians and field engineers to perform quality verification.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: 0801, 0802, 0809, 0810, 0830, and

0850; (b) Grade: GS-07, WG-09, or above. Five years of quality assurance experience as a mechanical technician or general quality assurance representative is recommended.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2001-1	Phoenix, AZ	11/13/2000 11/17/2000
2001-2	Phoenix, AZ	1/22/2001 1/26/2001

## HW MANIFEST (DOT) REF

**Long Title:** *Hazardous Waste (HW) Manifesting 12-Hour Refresher Workshop*

**429**                  Length: 12 Hours                  56HWR01A  
CEUs: 0.0                                      Tuition: \$310.00

**Purpose.** This course provides recurrent training regarding regulatory requirements of the Hazardous Materials Transportation Act (HMTA) as it applies to the generation, transportation, and disposal of hazardous waste and hazardous materials. It enables employers to certify that as required by 49 CFR 172 Subpart H, their hazmat employees have been trained and tested on general awareness requirements and on the generic function specific elements described below. (Note: Site-specific and safety related training elements required by 49 CFR 172 Subpart H may not be fulfilled by this course and should be evaluated by employers on an individual basis.)

**Description.** HMTA topics covered include general familiarization with the hazardous materials regulations including proper use of the hazardous materials table. Other topics include selection of proper shipping names; identification of reportable quantities; package selection; package marking and labeling; vehicle placarding; instruction on completing hazardous material shipping documents. Related RCRA topics also covered in this course include hazardous waste identification; application of hazardous waste codes; preparation of hazardous waste manifests and land disposal restriction notification forms; and recordkeeping. This course also addresses special requirements for shipping PCBs and asbestos.

NOTE: Requirements for Radiation Waste Class 9 Refresher Training will be met by any optional additional 4 hour block of instruction added to Session 01-01, scheduled for 15-19 Nov 2000 in Omaha, NE.

**Prerequisites.** Because this is a refresher course, it must be taken by persons who have already received initial DOT hazardous materials training. This course is primarily targeted at persons in the following series: 0802, 0809, 0810, 0819, 0028, 0029, 0025, 0026, 0401, 1350, 1301, 0893, 0830, and 1320. This training is designed for persons with any of the following job responsibilities: identification of proper shipping names in accordance with DOT regulations; selection of appropriate packagings in accordance with DOT regulations; marking, labeling or, placarding of hazardous materials, RCRA hazardous waste identification and classification; completion or review of hazardous







lines awaiting publication. Ongoing research to extend the state-of-the-art in this area of design will also be presented and discussed. Approaches for solving complex hydraulic design problems, together with future research needs, are covered. Upon completion, students should be able to apply state-of-the-art guidance and recommended criteria for the hydraulic design of Corps spillways and outlet works.

**Description.** The course includes lectures, open discussion, and field observation on numerous topics relative to the hydraulic design of spillways and outlet works. Major topics include (a) introduction to the design of outlet works and spillways; (b) hydraulic theory; (c) sluices for concrete gravity dams; (d) outlet control gates and valves; (e) outlet facilities for embankment dams; (f) computation of discharge rating curves; (g) energy dissipators; (h) energy loss on spillway crest; (i) selective withdrawal structures; (j) chute, side channel, and limited use spillways; (k) scour and downstream channel protection; (l) discussion of site specific problems; (m) physical model study demonstrations; and (n) open discussion of field design problems.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: Selected 0800 and 1300; (b) Grade: GS-07 or above.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2001-1	Vicksburg, MS	2/12/2001 2/16/2001

## HYDRO CONST MITI WET (SEM)

**Long Title: Hydrology for Constructed Mitigation Wetland**

**440**                      **Length: 36 Hours**                      **33HCM01A**  
**CEUs: 0.0**                      **Tuition: \$1,820.00**

**Purpose.** To provide state-of-the-science knowledge of wetland hydrology to enable existing Corps experts (engineering, planning, real estate, operations) to fulfill the demand for large-scale ecosystem restoration projects presently authorized or for the future.

**Description.** Wetland hydrology is the single most important factor in designing constructed wetlands. An introduction and overview of the prevalent water source models considering surface and ground water driven systems will be presented from both a case study and lessons-learned viewpoint. Past failures and successes will be examined. Important linkages between hydrology, wetland vegetation, soils, costs, engineering aspects, and real estate considerations are presented. Course focus will be directed toward large scale wetland ecosystem issues. Detailed water budget problems, calculations, solutions, and limiting factors are presented and evaluated in a highly facilitated problem-solving environment by the known experts in the field.

**Prerequisites.** Planning, engineering, regulatory, and natural resources personnel tasked with constructing

mitigation wetlands. GS 09-14 personnel operating at full performance level within series.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2001-1	Apalachicola, FL	2/26/2001 3/2/2001

## HYDRO SURVEY TECH

**Long Title: Hydrographic Survey Techniques**

056	Length: 38 Hours	35HST01A
CEUs: 3.0		Tuition: \$1,760.00

**Purpose.** This course provides participants with the knowledge and technology required in performing hydrographic surveys in support of USACE navigation, dredging, surveying, coastal engineering, inland waterways and related marine construction activities. The course is designed to provide engineers, engineer technicians, field survey technicians, and A-E contract administration personnel with a technical familiarization of the criteria, standards, and specifications in EM 1110-2-1003, Hydrographic Surveying, and applying this manual in performing in-house and contracted hydrographic surveys.

**Description.** This course provides instruction on the process and procedures used to conduct hydrographic surveys. The instructional program emphasizes the skills required to most effectively perform hydrographic surveys using electronic surveying equipment available at most district offices and A-E contractors. The major subject areas covered include: hydrography, survey datums, depth and position determination, horizontal and vertical error estimation and analysis, tidal theory, computer hardware and software used for automated hydrographic surveys, fluff measurement, volume computations, multi-beam swath and multitransducer sweep systems, differential GPS positioning systems, and project planning. Some horizontal and vertical measurement concepts and techniques will be demonstrated in the field.

**Prerequisites.** Nominees must be assigned (a) Occupational Series; 0800 (engineers, engineer technicians), 0817 and 1300 (field survey technician), and 0095 and 1100 (A-E contract administration personnel); (b) Grade: GS-05 or above. Waivers will be considered.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2001-1	St Louis, MO	7/9/2001 7/13/2001

**NEW**

## HYDROLOGIC ENGR/PLAN

**Long Title: Hydrologic Engineer Planning**

**057**                      **Length: 36 Hours**                      **35HEP01A**  
**CEUs: 0.0**                      **Tuition: \$1,840.00**

**Purpose.** This course provides an understanding of basic hydrology and hydraulics concepts and their application in water resource planning.



**Description.** The course provides participants with a conceptual understanding of hydrograph analysis, fluvial hydraulics, frequency analysis, reservoir studies, and management of hydrologic studies. The course is intended for professionals engaged in planning who have a limited background in the basic principles and theory of hydrology and hydraulics and their application in planning studies.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: Selected 0000-0100, 0400, 0800, and 1300; (b) Grade: GS-05 or above. Participants should be professionals with a limited background in hydrologic engineering who are (or soon will be ) engaged in water resource planning investigations.

Session	Location	Date
2001-1	Davis, CA	2/5/2001 2/9/2001

### INSTL SUPPORT

**Long Title: Installation Support**

**390 Length: 38 Hours 46ISB01A**  
**CEUs: 0.0 Offered As Onsite Course**

**Purpose.** This course provides students with a working knowledge and awareness of the basic missions, functions, policies, procedures, and organizational structures of the installation Directorate of Public Works Base Civil Engineer and the U.S. Army Corps of Engineers (USACE) district-level organizations. Its purpose is to inform and train DPW/BCE and district personnel involved in requesting, providing, and managing installation support services.

**Description.** The course focuses on the accomplishment of reimbursable funded programs and fostering a partnering relationship between the installation and district staff. The course uses a mix of lectures, practical exercises, case studies, and group discussions to convey a large amount of information that is essential to establishing a successful installation support program from both the installation and district perspectives. The course emphasizes (a) typical mission, function, and organizational structure of a DPW and a district office; (b) the Army and USACE Installation Support Program and the global installation support organization/network; (c) authorities, policies, and procedures; (d) statutory and regulatory requirements and constraints; (e) planning, engineering studies, environmental, and other support services; (f) architect-engineer contract support, design execution and project management; (g) construction execution and contract management; and (h) partnering and customer service and sensitivity.

**Prerequisites.** Attendees should have been in their respective organizations a minimum of 1 year before attending this course. Target grade level of attendees is GS-07 and above. Each session will attempt to approximate a 50-50 mix of installation/base and district personnel. Typical functional areas appropriate for

this course are the same for both installation/base and district personnel. Primary functional areas include engineering, construction, project management, environmental, housing, operation and maintenance. Secondary functional areas include resource management, contracting and real estate.

**Notes.** SPECIAL NOTE: This is a highly effective onsite training course. Onsite sessions allow the district and their supported installation to participate together in the learning and partnering process.

### INSTRUCTION METHODS

**Long Title: Instructional Methods**

**064 Length: 36 Hours 48ITB01A**  
**CEUs: 0.0 Tuition: \$700.00**

**Purpose.** This course provides potential instructors with a knowledge of, as well as practice implementing, methods and techniques necessary to design, develop, instruct, and evaluate a training course.

**Description.** Topics covered through lectures, demonstrations, and practical exercises include Corps of Engineers Systems Approach to Training, roles of the instructor, instructional objectives, communications skills, lesson planning, instructional aids, the adult learner, methods of instruction, classroom management, counseling, tests, and questioning techniques. The student demonstrates mastery of these topics through the development and presentation of a lecture, lecture with questions, and student involvement activity.

**Prerequisites.** Nominees should be assigned (a) Occupational Series: All; (b) Grade: All. This course is designed for potential instructors in the PROSPECT program. However, the methodology presented is beneficial to any individual charged with developing and conducting any type training, presentation, or briefing.

**Notes.** This course contains requirements which are mandatory for course completion and may require an estimated 6 hours of overtime. It is your responsibility to bring this to the attention of your supervisor so that an overtime request/determination can be made by your appropriate personnel. It is also your responsibility to certify the amount of time expended on these requirements to your supervisor when you request overtime compensation.

Session	Location	Date
2001-1	Huntsville, AL	10/16/2000 10/20/2000
2001-2	Huntsville, AL	12/4/2000 12/8/2000



## INTERIOR DESIGN

**Long Title:** *Interior Design: Goals, Processes, and Issues*

**335**                      **Length: 36 Hours**                      **35ID101A**  
**CEUs: 2.8**    **Tuition: \$1,610.00**

**Purpose.** USACE has an interior design program staffed by professional interior designers who implement USACE policy, criteria, and guidelines to develop excellent building interiors for all types of facilities. This course addresses the Army Interior Design Program and related design issues to explain the practical applications of the program. Practical applications relate to developing a scope of work for obtaining professional interior design services, design/review criteria, building related interior design specifications and materials, and furniture related procurement data. In addition, the course emphasizes the importance of teamwork in the implementation of all phases of development from project planning to moving in and managing facilities.

**Description.** Topics include: (A) Policy & Process: (1) history and policy; (2) project initiation; (3) design investigation process; (4) design documentation and implementation; (B) Team roles and responsibilities; (C) Design issues: (1) life safety and accessibility; (2) indoor air quality; (3) acoustics; (4) color; (5) lighting; (6) ergonomics; (7) administrative space planning; (D) Applications: (1) building related interior design; (2) furniture systems; (3) furniture related interior design; (E) Occupancy issues, facility management and moving in; (1) operations policy; (2) current trends; and (F) a field trip to view successful installations. Upon completion students should be able to identify the need for professional interior design services, assist in developing a design scope, and facilitate the implementation of interior design, particularly the final phases where the user is in the lead role.

The course utilizes power point presentations, slides, viewgraphs, video tapes, and a bus trip to selected locations to teach the issues.

**Prerequisites.** Nominees should be assigned (a) Occupational Series: 0020, 0170, 0300s, 0800s, 1001, 1008, 1102, 1170, 1171, 1640, 1910, and 1960; (b) Grade: GS-O7 or above. Military E6/O2 or above; (c) any government employee whose work relates to the design, construction, procurement or management of facilities. This course is open to nominees from installation using activities, DPWs, MACOMs, and design agencies. Although the course emphasizes Army policy, other agencies are welcome; and (d) the field trip on day four may take up to nine hours including transportation to and from the hotel. If you feel your work status requires overtime be paid for the attendance of this activity, arrangements should be made in advance with your supervisor.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2001-1	Chicago, IL	4/2/2001    4/6/2001

## INTERIOR FLOOD HYDRO

**Long Title:** *Interior Flooding Hydrology*

**173**                      **Length: 36 Hours**                      **35IFH01A**

**Purpose.** This course provides the participant an opportunity to gain a working knowledge of available techniques for hydrologic analysis of flood hazard for interior areas.

**Description.** Interior area flood problems arise when natural drainage paths are blocked such as by levees, floodwalls, and coastal barriers. This course characterizes the interior flooding problem and provides techniques for evaluating such measures as detention basins, gravity drains, and pumping stations. Simulation techniques, coincident frequency analysis, and other approaches are treated in lectures, problem-solving sessions, and case studies. Engineering and other considerations in selecting and sizing interior flood control facilities are emphasized. Action required to preserve the functional capabilities of interior flood facilities are discussed. The newly-developed Interior Flooding Hydrology computer program will be used for lectures, demonstrations, and workshops.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: Selected 0800 and 1300; (b) Grade: GS-O7 or above. The participant should have a working knowledge of surface water hydrology and open channel hydraulics. In addition, it is required that course participants be in positions, or anticipate being in positions, where they will be involved in interior flood control studies within the next year or two.

## INTERPRETIVE SERVICE

**Long Title:** *Interpretive Services*

**072**                      **Length: 24 Hours**                      **53INT01A**  
**CEUs: 0.0**    **Tuition: \$920.00**

**Purpose.** This course is intended for those employees in natural resources management career fields and others who have interpretation or related job responsibilities. The course is designed to develop an awareness and understanding of the Corps Interpretive Services and Outreach Program, to show how interpretation can be used as a management tool, and to enhance the skills of those presently involved in interpretation.

**Description.** After completing the course, the student should be able to develop and maintain an effective interpretive services program. Topics covered include (a) definition of interpretation and outreach; (b) objectives of Corps interpretive efforts; (c) target groups and media selection; (d) basic interpretive techniques; (e) use of volunteers; (f) role of the manager in interpretation; (g) visitor center exhibit contracts; and (h) use of







The course instructs Corps engineering personnel in the techniques of masonry design and construction utilizing TI 809-06 "Masonry/ Design for Buildings" and seismic issues will be addressed and the bases for all seismic design will be TI-809-05, "Seismic Design for Buildings" and TI 809-05, "Seismic Evaluation and Rehabilitation for Buildings." other pertinent literature. Approximately 80% of Army buildings include masonry as a building unit. Proper design will eliminate future problems and be cost effective.

**Description.** Topics include (a) masonry materials, properties, and testing; (b) design loads; (c) reinforced masonry design and construction; (d) lateral load considerations and shear wall design; (e) column/plaster design; (f) masonry lintels; (g) bond beams; (h) masonry specifications; (i) masonry details; (j) workshop design problems; (k) evaluation and retrofit; and (l) quality assurance. After taking this course the structural engineer should be able to design a cost effective building that has incorporated the latest technologies to produce a building with the desired structural integrity. The manuals to be used are TI 809-06, "Masonry Design for Buildings" along with other Corps manual and referenced national guidance and standards.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: Selected 0800; Grade: GS-07 or above. Nominees should be engineers with masonry design or construction responsibilities. Course is open to Air Force and Navy personnel.

**Notes.** This course is also available in exportable format. Refer to Section 3.

Session	Location	Date
2001-1	To Be Determined	7/16/2001 7/20/2001

## MASTER PLANNING

**Long Title: Real Property Master Planning**

075	Length: 36 Hours	46PMP01A
CEUs: 2.5		Tuition: \$850.00

**Purpose.** This course is designed as an introduction to REAL PROPERTY MASTER PLANNING for planners at Army installations and Corps of Engineers district levels. The goal of the course is to make planners more effective by providing them with the information, understanding, and tools they need to operate within the Army Real Property Master Planning system. For non-planners, this course provides an overview of how an installation's planning is performed and how their organization fits into the process. General planning principles covered in this course may be applicable to the U.S. Army Reserves and other military services and Government agencies.

**Description.** Through lectures, case studies, group interaction, and practical exercises, this course will (a) explain the clarify AR 210-20, Master Planning for Army Installations; (b) present the planning process/methodology in general and how it is applied to the Real

Property Master Planning system; (c) show the role and relationship of real property planning to the Army's Planning, Programming, Budgeting, and Execution System (PPBES); (d) explain the structure of the Army and its installations, and how and where the facility planer fits into it; (e) emphasize that planning for any complex system requires teamwork and coordination; (f) explain how to establish and manage the Real Property Planning Board.

**Prerequisites.** Nominees must be assigned (a) Grade: GS-05 or above; (b) personnel associated with military installation real property planning and management support functions at Army installation/communities, MACOMs, MSCs, USAR, RSCs, USACE divisions/districts, and supporting contractor.

Session	Location	Date
2001-1	Huntsville, AL	2/12/2001 2/16/2001

## MASTER PLANNING SKILLS

**Long Title: Master Planning Tools Applied Skills**

326	Length: 36 Hours	46MPS01A
CEUs: 0.0		Tuition: \$900.00

**Purpose.** This course provides basic skills required by master planners to perform day-to-day functions. It provides knowledge of processes, procedures, and the automated planning tools that support these functions.

**Description.** Through lecture and hands-on computer exercises, this course covers the process of developing allowances and requirements, the description and use of the Real Property Planning and Analysis System (RPLANS), the use of spatial data systems in support of the master planning process, and the implications and use of other data sources (real property, installation status). Other automated planning tools discussed include: HQEIS, ISR, FPS, ACTS, and ASIP.

**Prerequisites.** Attendees should be engaged in the real property planning and management of Army Real Property facilities. Participants require the fundamental knowledge of master planning or real property and supporting automated systems to properly plan for and manage Army facilities.

Session	Location	Date
2001-1	Huntsville, AL	1/8/2001 1/12/2001

## MDS - DESIGNER PKG

**Long Title: Modular Design System - Designer Package**

284	Length: 38 Hours	54MDS01A
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**Purpose.** This course introduces the overall operation and use of the Modular Design System (MDS) and the application of the system to design Army vehicle maintenance facilities, Army Reserve Centers, and armories.



**Description.** The course presents training in the overall operation of MDS Programmer and Designer packages, and presents detailed training to complete the design of a facility based on the layout developed using the MDS Programmer Package, and to generate construction drawings, specifications, and cost estimates to the maximum features of the MDS Designer package. The training includes practical exercises to demonstrate techniques for interface of MDS software with MicroStation (TM) computer-aided design and drafting (CADD), and Micro Computer Aided Cost Estimation System (MCACES) software.

**Prerequisites.** Students should possess a working knowledge of a design and engineering discipline such as architecture, civil, structural, mechanical, electrical, or plumbing; have a basic understanding of personal computer (PC) operations; possess an introductory level understanding of the MicroStation (TM) through formal training or experience; be a college graduate in a field relating to architecture or engineering, or equal in job experience; and be at, or equal to, an entry grade level or higher commensurate to that associated at the Corps of Engineers as a qualified design team member.

#### MDS - PROGRAMMER PKG

**Long Title:** *Modular Design System - Programmer Package*

**186**                      **Length: 38 Hours**                      **54CAM01A**

**Purpose.** This course introduces the overall operation and use of the Modular Design System (MDS), and its application of the system to complete programming level functional layouts and associated programming cost estimate for Army vehicle maintenance facilities, Army reserve centers, or armories.

**Description.** The course presents training in the overall operation of MDS Programmer and Designer Packages, and presents detailed training to develop programming level functional layouts of any facility type available in MDS. The course focus is practical application of MDS techniques and principles for placing design modules, depicting appropriate functional layouts, and generating programming estimates to the maximum features of the MDS Programmer Package. The training includes practical exercises to demonstrate techniques for interface of MDS software with MicroStation (TM) computer aided design and drafting (CADD) and Micro Computer Aided Cost Estimation System (MCACES) software.

**Prerequisites.** Students should possess a working knowledge of programming facilities for Army Reserve, National Guard, or facilities in the MDS program; have a basic understanding of personal computer (PC) operations; and have an introductory level understanding of MicroStation (TM) through formal training or experience.

**Notes.** THIS IS NOT A MICROSTATION (TM) TRAINING COURSE.

#### MECH SYSTEMS COMM

**Long Title:** *Mechanical Systems Commissioning*

**327**                      **Length: 36 Hours**                      **35MSC01A**  
**CEUs: 3.0**                      **Tuition: \$1,350.00**

**Purpose.** This course provides practical technical information to fulfill construction quality verification duties for commissioning of mechanical systems. The course identifies procedures for startup, sequence of operation, and testing that pertain to mechanical equipment and repetitive deficiencies in system performance. To complement this course Mechanical Systems Commissioning Workshop is offered.

**Description.** Through lecture, visual aids, conferences, and testing, this course presents the following mechanical subjects: commissioning of mechanical systems, cooling systems, heating systems, air side systems, control systems, fire protection systems, and water supply and waste systems. A 2-day lab experience is included where students observe proper performance testing of HVAC Systems.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: 0801, 0802, 0809, 0810, 0830, and 0850; (b) Grade: GS-05 through GS-12; (c) a current or projected position as an engineer, engineering technician, construction representative, or resident engineer with mechanical quality assurance (directly or supervised) responsibilities. Nominees should have completed the exportable course, the PROSPECT Quality Verification: Mechanical course or have experience in mechanical quality assurance at least equivalent to the basics presented therein. Engineers are exempt from these requirements. NOTE: Material presented will be beneficial for shop drawing reviewers and facilitators of the PROSPECT exportable Mechanical-QV course.

Session	Location	Date
2001-1	Phoenix, AZ	4/2/2001 4/6/2001

#### MECH SYSTEMS COMM WORKSHOP

**Long Title:** *Mechanical Systems Commissioning Workshop*

**445**                      **Length: 28 Hours**                      **35MCW01**

**Purpose.** This workshop provides practical onsite (as requested) procedures for commissioning building HVAC systems to provide a building owner with a building that is complete, in compliance with the plans and specifications, and operationally and functionally ready. This includes: (a) verifying the operation of HVAC system components under various conditions; (b) verifying interactions between systems and subsystems; (c) documenting system performance in reference to design criteria, and; (d) instructing workshop attendees how to operate the building systems and equipment most efficiently.



**Description.** This workshop is a complement to PROSPECT Course 327, Mechanical Systems Commissioning. It is designed to provide additional hands on training at an installation or existing facility. The workshop can be tailored to meet the needs of the students. Following an introduction and limited classroom lecture, several days are spent with the students commissioning an existing building selected by the customer. Instrumentation will be provided to complement the instrumentation available at the installation.

**Prerequisites.** Nominees should be assigned (a) Occupational Series: 0801, 0802, 0809, 0810, 0830, and 0850; (b) Grade: GS-05 through GS-12, or Wage Grade; (c) as an engineer, engineering technician, construction representative, or operation and maintenance personnel. Nominees should have previously attended the Mechanical Q.V. or have experience in mechanical quality assurance at least equivalent to the basics presented therein. Attendance at the Mechanical Systems Commissioning course is recommended. Engineers are exempt from these requirements.

**MECHANICAL—QV**

**Long Title: Quality Verification: Mechanical**

**074**                      **Length: 35 Hours**                      **35MCQ01A**  
**CEUs: 3.2**                      **Tuition: \$840.00**

**Purpose.** This course provides the participant with information, procedures, and problem area solutions that must be known to effectively perform mechanical quality assurance duties. The course specifically addresses preparatory, initial, and follow-up inspection techniques concerning the equipment, material, and testing requirements for mechanical systems common to most building construction.

**Description.** Through lecture, visual aids, conferences, and case study sessions, this course covers such subjects as (a) plumbing, (b) heating, (c) refrigeration, (d) air-conditioning, (e) fire protection, (f) HVAC controls, (g) outside utilities, (h) insulation, and (i) underground storage tanks. It emphasizes the government QA representative's role in construction quality management.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: 0801, 0802, 0809, 0810, 0830, and 0850; (b) Grade: GS-05 through GS-12. Nominees should have a current or projected assignment as an engineer, engineering technician, or construction representative, GS-12 and below, with mechanical quality assurance representative responsibilities. Nominees must not have attended this course or a similar course within the past 5 years.

**Notes.** This course is also available in exportable format. Refer to Section 3.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2001-1	Jacksonville, FL	10/16/2000 10/20/2000
2001-2	Huntsville, AL	6/4/2001 6/8/2001

## MGT OF HYDROPWR-O&M

**Long Title: Management of Hydropower Operations and Maintenance**

**376**                      **Length: 36 Hours**                      **35MHO01A**  
**CEUs: 0.0**                      **Tuition: \$1,610.00**

**Purpose.** This course is designed primarily for civil works managers, supervisors, engineers, and technicians who have hydropower operations and maintenance responsibilities. It provides a comprehensive understanding of the management of the hydropower facilities. It may also be of benefit to planners, design engineers, hydrologists, and Reservoir Control Center staff who need an understanding of hydropower O&M from the field level perspective.

**Description.** Through the use of lectures and practical examples, this course covers such topics as operations and maintenance of hydroelectric generating units and associated equipment including theory; operations and maintenance management; personnel and labor relations; budgeting; training; safety; contract administration; hydropower testing program; and other operations and maintenance management and technical topics.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: 0025, 0100, 0400, 0800, and 1600; (b) Grade: GS-09 or above; (c) as engineers and technicians at hydropower plants for operations and maintenance; (d) as managers and supervisors with responsibility for hydropower plants for operations and maintenance; (e) to district or division office level positions in hydropower operations and maintenance; to positions requiring an extensive knowledge of hydropower operations and maintenance practices, especially those anticipating assignment to a position in hydropower operations and maintenance; and (f ) as planners, designers, and water control engineers who need an understanding of the practical side of hydropower O&M in order to perform their mission.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2001-1	Huntsville, AL	4/23/2001 4/27/2001

### MIN/MITGTN WRP IMPCT

**Long Title:** *Minimization and Mitigation of Water Resource Project Impacts*

**277**                      **Length: 36 Hours**                      **35MMP01A**  
**CEUs: 2.6**

**Purpose.** This course provides engineers and scientists with knowledge to plan, design, construct, operate, and maintain water resources projects to avoid, minimize, and mitigate environmental impacts.

**Description.** Course topics include (a) general principles of mitigation; (b) assessing habitats and impacts of water resource projects; (c) resource assessment; (d) evaluating habitat/resource components; (e)







**Prerequisites.** Nominees must be assigned (a) Occupational Series: Selected 0023, 0025, 0300, 0400, 0800, and 1100; (b) Grade: GS-05, WG-05, and above. Students should have current or projected assignments involving project contracting procedures.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2001-1	Albuquerque, NM	10/24/2000 10/27/2000
2001-2	Huntsville, AL	3/20/2001 3/23/2001

## O&M CONTRACTS ADV

**Long Title:** *Advanced Administration of Operations and Maintenance Contracts*

**318**                      **Length: 32 Hours**                      **41OMA01A**  
**CEUs: 1.8**                      **Tuition: \$950.00**

**Purpose.** This course provides operations/project personnel with additional skills for developing and administering service, maintenance, and construction contracts.

**Description.** Through lectures, field exercises, and directed discussion sessions, this course covers contract types, administrative considerations, legal implications, and handling adverse circumstances of O&M contracts. This course provides project contract administration personnel with advanced understanding in project operations where significant reliance on O&M contracting is required.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: Selected 0023, 0025, 0300, 0400, 0800 and 1100; (b) Grade: GS-07 or above or equivalent WG grade and series. Students should be assigned project office contracting responsibilities, or district office personnel involved in contract administration supervision. Students must have completed the Administration of Operation and Maintenance Contracts basic course (No. 119).

**Notes.** SPECIAL INSTRUCTIONS. This course includes a one-day field trip. Students should be prepared for inclement weather and bring appropriate shoes and clothing.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2001-1	Little Rock, AR	10/31/2000 11/3/2000
2001-2	Augusta, GA	3/27/2001 3/30/2001
2001-3	Hot Springs, AR	5/8/2001 5/11/2001

## OPERATIONS MANAGEMENT

**Long Title: Operations Management Workshop**

**245**                      **Length: 32 Hours**                      **46OMW01**  
**CEUs: 0.0**                      **Tuition: \$1,060.00**

**Purpose.** This course will give emerging leaders the operations managers perspective of managing a project. It also provides an overview of Corps of Engineers operations business processes and systems. It is intended to foster a uniform understanding of the initiatives and improvements introduced in the operations arena over the past several years. It is mission essential training for Operations Managers.

**Description.** This course covers a broad range of topics that personnel in Operations Management must be familiar with. It focuses on: (a) the operations business process; (b) programs and policies in effect for projects and facilities; (c) applicable laws and regulations governing operations; and (d) necessity and values of interaction with stakeholder groups.

**Prerequisites.** Nominees must be: (a) Grade GS-09 or above; (b) directly involved in the management of operating projects for USACE. First consideration will be given to Operations Project Managers and senior MSC, district or project people who aspire to, or have been identified by management to become, Operations Project Managers.

<u>Session</u>	<u>Location</u>	<u>Date</u>	
2001-1	Washington, DC	2/12/2001	2/16/2001
2001-2	Washington, DC	8/6/2001	8/10/2001

## ORD AND EXP RESPONSE

**Long Title: Ordnance and Explosives (OE)  
Response Workshop**

**399**                  Length: 32 Hours                  58EXS01A  
CEUs: 0.0                              Tuition: \$540.00

**Purpose.** This workshop is for staff level project managers and technical engineering disciplines, safety and occupational health professionals, legal, public affairs, real estate, and management personnel having responsibilities in U.S. Army Corps of Engineers for Ordnance and Explosives under the Defense Environmental Restoration Program to include Formerly Used Defense Sites, and Installation Restoration; and under the Base Realignment and Closure Program. This workshop provides an overview of information concerning the Corps' role in Ordnance and Explosives cleanup activities under the Defense Environmental Restoration Program to include Formerly Used Defense Sites, and Installation Restoration and the Base



Realignment and Closure program to include in-depth information on ordnance safety and recognition.

**Description.** This workshop consists of classroom instruction focusing on U.S. Army Corps of Engineers Ordnance and Explosives cleanup activities under the Defense Environmental Restoration Program covering Formerly Used Defense Sites, Installation Restoration/Base Realignment and Closure as well as work for others. The workshop addresses the U.S. Army Corps of Engineers Center of Expertise organizational structure and functional responsibilities, environmental laws and regulations, legal issues, programmatic policies and procedural requirements, project management and project execution, ordnance safety and recognition, safety sources of information, ordnance avoidance techniques, Ordnance and Explosives detection and disposal, Ordnance and Explosives contracting, indemnification, Defense State Memorandum of Agreements, Community Relations, formulation of Restoration Advisory Boards, and Administrative Record requirements.

**Prerequisites.** Attendees should be staff level project managers and technical engineering disciplines, safety and occupational health professionals, legal, public affairs, real estate, and management personnel working on OE cleanups.

Session	Location	Date
2001-1	Huntsville, AL	8/6/2001 8/10/2001

### ORDRESP PROJ/CWM

**Long Title:** *Ordnance Response Projects at Chemical Warfare Materiel (CWM) Sites Workshop*

<b>255</b>	<b>Length: 24 Hours</b>	<b>560RP01A</b>
<b>CEUs: 0.0</b>		<b>Tuition: \$830.00</b>

**Purpose.** This workshop is for staff level project managers and technical engineering disciplines, safety and occupational health professionals, and management personnel involved in cleanup activities on Chemical Warfare Materiel sites under the Defense Environmental Restoration Program. The sites consist of Formerly Used Defense Sites, Installation Restoration and Base Realignment and Closure sites. This workshop provides an overview of information concerning the Corps' role and the role of other activities and agencies in the cleanup of Chemical Warfare Materiel sites.

**Description.** This workshop consists of classroom instruction covering the regulatory requirements for cleanup of Chemical Warfare Materiel; the roles and responsibilities of the Corps and other activities and agencies; Chemical Warfare Materiel agents and their effects; ordnance identification; decontamination procedures; analytical methodology for soil and water; degradation by-products; strategies for sampling; air monitoring equipment to include their operation, maintenance, and uses; contents of the safety submission;

downwind hazard methodology; medical support requirements; Technical Escort Unit operations plans; protective action plans and required exercises; personnel protective equipment, storage, transportation, and disposal considerations.

**Prerequisites.** Students should be staff level project managers and technical engineering, disciplines, safety and occupational health professionals, and management personnel involved in cleanup activities on Chemical Warfare Materiel sites.

Session	Location	Date
2001-1	Huntsville, AL	6/12/2001 6/14/2001

### OSHA INSPECTION

**Long Title:** *OSHA Inspection/Compliance for Construction and Operations Activities*

<b>063</b>	<b>Length: 36 Hours</b>	<b>58INS01A</b>
<b>CEUs: 0.0</b>		<b>Tuition: \$820.00</b>

**Purpose.** This course provides personnel that are assigned collateral-duty safety and health responsibilities with the program basics from which they can administer a division/district or FOA safety and occupational health program. This training is also pertinent for those field construction personnel that are assigned quality assurance roles with corresponding safety and health responsibilities.

**Description.** Lectures, demonstrations, and reading assignments will cover the areas listed below and enable the students to identify safety hazards and areas of noncompliance with Corps of Engineers and Occupational Safety and Health Administration (OSHA) requirements. Specific areas covered include (a) overview of OSHA (current OSHA requirements) and Corps of Engineers safety and health requirements; (b) scaffolding and access; (c) trenching and excavation; (d) temporary electrical service; (e) heavy equipment; (f) personal protective equipment; (g) fire prevention; (h) confined spaces and entry; (i) motor vehicles; (j) safety submittals; (k) accident reporting and recording; and (l) accident prevention plans and hazard analyses.

**Prerequisites.** Students should be assigned as collateral-duty or project safety person, or assigned as construction representative and/or quality assurance representatives, or other personnel with safety responsibilities, e.g., safety committee members.

Session	Location	Date
2001-1	Huntsville, AL	3/26/2001 3/30/2001
2001-2	Denver, CO	4/23/2001 4/27/2001
2001-3	Huntsville, AL	5/14/2001 5/18/2001



## PAINT

**Long Title: Paint, Coatings and Quality Assurance**

**084**                      **Length: 36 Hours**                      **35PNT01A**  
**CEUs: 3.1**                      **Tuition: \$940.00**

**Purpose.** This course is designed to reduce painting deficiencies by providing the participant with quality assurance techniques and the basic concepts of paint composition, coating selection, safety, and construction quality management necessary to administer the painting requirements of the plans and specifications.

**Description.** Through lectures, conferences, hands-on demonstrations and laboratory sessions, this course covers such subjects as paint fundamentals; characteristics and selection of coatings; surface preparation and painting of steel and other metals, concrete and concrete block, wood, plaster, wallboard, and other miscellaneous surfaces; paint defects; paint approval; testing instruments; painting specifications; and safety and environmental considerations. CONSTRUCTION QUALITY MANAGEMENT, ALONG WITH MAINTENANCE PAINTING, IS EMPHASIZED.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: 0800; (b) Grade: GS-05 or above. Students must have current or projected assignments as general quality assurance representatives with paint quality assurance responsibilities. This includes architects and engineers with design, specification and review responsibilities. Participants must not have attended a similar course within the past 5 years. This course is also open to those individuals from DPWs, BCEs, NAVFAC and other government agencies who are responsible for quality assurance, specifying paint requirements for maintenance or new construction and those serving on constructibility review teams.

**Notes.** Capability to provide customized, onsite training upon request.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2001-1	Arlington, TX	2/12/2001 2/16/2001

## PAINT COATINGS (SUB)

**Long Title:** *Paint Coatings Submersible*

**083**                      **Length: 36 Hours**                      **73PCS01A**  
**CEUs: 2.6**                      **Tuition: \$1,210.00**

**Purpose.** The emphasis of this course is on the painting of Corps of Engineers civil works structures. Handbooks include the civil works construction guide specification CWGS 09940, "Painting: Hydraulic Structures and Appurtenant Works" and the engineering and design manual EM 1110-2-3400, "Painting: New Construction and Maintenance."

**Description.** This course covers the following topics that affect field painting projects: (a) paint selection; (b)

surface preparation; (c) application of paint chemistry; (d) application methods and equipment; (e) corrosion principles; (f) inspection; and (g) environmental and safety regulations.

**Prerequisites.** Nominee must be assigned (a) Occupational Series: Selected 0800 and 1300; (b) Grade: GS-07 and above. Disciplines and grade levels (other than above) are accepted provided nominee's present or anticipated duties require knowledge of paint and coating systems for hydraulic civil works structures. Nominee's job should require knowledge of CWGS-09940 as well as EM-1110-2-3400.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2001-1	Champaign, IL	1/22/2001 1/26/2001

## PAVE DESIGN &amp; CONST

**Long Title: Pavement and Drainage Design and Construction**

**085**                      **Length: 60 Hours**                      **35PDC01A**  
**CEUs: 0.0**                      **Tuition: \$1,910.00**

**Purpose.** This is a basic course for engineers or technicians responsible for pavement design, construction, and/or maintenance. After completing the course, with proper references, the student should be able to (a) select the best pavement system for a particular application with the consideration of life cycle cost and maintenance; (b) perform a complete design of flexible or rigid pavement including drainage, subdrainage, and freeze and thawing considerations; and (c) correctly identify major defects in the pavement construction and select the proper remedies to correct the problem.

**Description.** Through lectures, tours to laboratories, hands-on exercises, and discussions, this course covers the general concept in pavement design and construction, selection of pavement system, design procedures, construction methods, material testing, surface and subsurface drainage design, computer applications, and new technology in pavement construction.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: Selected 0800 series; (b) Grade: GS-09 or above. Student should have a current or projected assignment as a design or construction engineer or senior technician responsible for pavement and drainage design, construction, or maintenance.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2001-1	Vicksburg, MS	2/27/2001 3/8/2001



## PAVEMENT CONST—QV

### *Long Title: Quality Verification: Pavement Construction*

**400**                      **Length: 60 Hours**                      **35PVQ01A**  
**CEUs: 0.0**    **Tuition: \$1,850.00**

**Purpose.** This course identifies and discusses the requirements for verifying the production and placement of pavements.

**Description.** This course covers current Corps of Engineers techniques for quality assurance of all types of pavements including: (1) subgrade, subbase, and base courses; (2) primes, tacks, and seal coats; (3) surface treatment and slurry seals; (4) plant-mixed bituminous paving mixtures; (5) sampling, testing, handling, mixing, placing, finishing, and curing portland cement concrete pavements. In addition, it covers necessary field tests, interpretation of results, and verification required to assure the production of quality pavements on construction projects. Instruction includes classroom lectures and laboratory demonstrations.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: Selected 0800, 0801, 0802, 0809, 0810, 0830, and 0850; (b) Grade: GS-05 or above. Students must have current or projected assignments as general or pavement construction quality assurance representatives or related duties at the field level. This course is also well-suited for junior engineers as part of the training provided in engineer-in-training programs and for Corps division, district, and field office personnel directly concerned with construction operations. The attendee must not have attended this course or a similar course within the past 5 years.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2001-1	Vicksburg, MS	1/23/2001 2/1/2001

## PAVEMENT EVAL/REPAIR

### *Long Title: Pavement Evaluation, Maintenance, and Repair for Engineers and Technicians*

**115**                      **Length: 60 Hours**                      **75PER01A**  
**CEUs: 0.0**    **Tuition: \$1,840.00**

**Purpose.** This course provides engineers, engineering technicians, and qualified shop foremen with tools and techniques for pavement evaluation and project development to the design stage.

**Description.** This course focuses on engineering selection of maintenance and repair for techniques and current technology for effective selection of maintenance and repair for installation pavements. This course provides a sequential approach to data gathering and identification of pavement distresses, their causes, and alternative maintenance and repair techniques. The course also includes project level evaluation,

including field and laboratory measurements, nondestructive testing, materials engineering, technical analysis, and preliminary design of feasible alternatives. The relationship of these activities to the PAVER Pavement Management System will be introduced.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: Selected 0800; (b) Grade: GS-05 or above and qualified maintenance foremen (WB-4704/-4703).

<u>Session</u>	<u>Location</u>	<u>Date</u>
2001-1	Vicksburg, MS	3/27/2001 4/5/2001

## PAVEMENT MAINT TECH

### *Long Title: Pavement Maintenance Techniques for Maintenance Personnel*

**125**                      **Length: 36 Hours**                      **75PMT01A**  
**CEUs: 0.0**    **Tuition: \$1,510.00**

**Purpose.** This course teaches methods and techniques for maintenance and repair of pavements.

**Description.** This course focuses on practical and effective maintenance and repair methods and techniques. Emphasis is on field demonstrations, with supplementary lectures, films, and handout materials. Techniques and applications taught are those which can reasonably be accomplished by facilities engineer in-house activities, but course material also covers recurring and cyclic maintenance requirements and approaches to implementation of preventive maintenance.

**Prerequisites.** Nominees must be assigned to an activity with responsibility for maintenance, repair and improvements of installation facilities (e.g., Army facilities engineer, Air Force base civil engineer) or Corps of Engineers field operations and maintenance activities. This course is designed for maintenance personnel and interested technical staff.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2001-1	Vicksburg, MS	11/13/2000 11/17/2000

## PCA/FINANCE PLAN DEV

### *Long Title: Project Cooperation Agreements (PCA) and Financing Plan Development: Policies, Practices, and Procedures*

**315**                      **Length: 28 Hours**                      **46LCA01A**  
**CEUs: 0.0**    **Tuition: \$1,690.00**

**Purpose.** This course provides project managers, real estate specialists, counsel, and others working project cooperative agreements with the basic knowledge, skills, and abilities needed to develop PCA packages and to conduct financial analyses during project planning and implementation. Participants will learn critical aspects of managing the PCA process from under-



standing the fundamentals of project finance and financial analysis principles and methods, its relationship to program/project management, funding and construction scheduling and the new start Project Cooperation Agreement (PCA), policy, development, and negotiation.

Lecturers and instructors include the HQUSACE Civil Works staff, field personnel, and representatives of the non-Federal sponsor.

**Description.** Topics include: (a) Policy for New Start/Project Cooperation Agreement Process, Development Negotiation and Processing; (b) Planning, Policy, Program, Real Estate, and Legal Considerations; (c) Non-Federal Financing Considerations; (d) Municipal Finance/Credit Analysis/Cost/Revenue and Fiscal Analysis; (e) Program Management and Implementation Procedures and Applications; (f) Budgeting, Funding, and Construction Scheduling; (g) Policies and Procedures to Account for Project Funds, (h) Project Examples and Experiences, and (i) Legal Aspects.

**Prerequisites.** Nominees must be assigned (a) Grade: GS-09 to GS-15; (b) current responsibilities in project planning, study management, engineering management, economic analysis, project management, real estate, local cooperation, new start budget development, legal review, or assigned to the Office of Counsel.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2001-1	Huntsville, AL	3/13/2001 3/16/2001
2001-2	Cincinnati, OH	8/14/2001 8/17/2000

### PLANNING FOR PROJECT EXEC

*Long Title: Planning for Project Execution Workshop*

224 Length: 20 Hours 56TPP01A

**Purpose.** This workshop will enable students to apply the comprehensive and systematic planning process presented in EM 200-1-2. Technical Project Planning (TPP) Process to new and ongoing HTRW projects in order to accelerate progress to site closeout within all project constraints. This workshop covers the development of project objectives for both overall site approaches and current project strategies as well as activities necessary to establish data quality objectives if additional data must be obtained. Systematic planning supports development of the management plan for projects as required by ER 5-1-11 and satisfies the requirements in EPA order 5360-1, Change 1.

**Description.** This workshop will teach the four phase TPP process by lecture and by participation in a hands-on case study. Documentation tools provided in EM 200-1-2 for the planning activities will be used. Key concepts include TPP team, customer goals, site closeout, project objectives, constraints and dependencies, and data quality objectives. Activities will include (a) identifying the overall approach for managing a site

from its current condition to the desired site closeout condition and documenting it by the development of project objectives; (b) identifying the current project by detailing the strategy for the current executable stage of site activities in detailed project objectives; (c) identifying constraints and dependences that will effect the project; (d) determining if additional data are needed and identifying those data needs; (e) developing appropriate sampling and analysis approaches; (f) developing data collection options that obtain the data needed for the current project, identify data that will be needed as the site progresses to site closeout that can be cost-effectively obtained during the current project, and identify proposed data that is imposed or mandated by others that is not required to reach site closeout; and (g) writing the data quality objectives for all data to be obtained. This workshop is designed for onsite presentation at districts and division locations. For more information about an onsite session, please contact Joy Rodriguez, (256) 895-7448.

**Prerequisites.** Target audience nominees must be management, technical and other personnel responsible for engineering, scientific, and legal aspects of the USACE HTRW projects through either a current or projected assignment. This includes chemists, geologists, hydrogeologist, industrial hygienists, legal counsel, project managers, regulatory specialists, remediation designers/engineers, and risk assessors. Grades should be GS-07 and above.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2001-1	DATES AND LOCATION TBD	

### PLN-PRINPROC

*Long Title: Planning - Principles and Procedures*

077 Length: 36 Hours 35PPP01A  
CEUs: 0.0 Tuition: \$970.00

**Purpose.** This course provides district and division planners with an overview of how Corps of Engineers water resource projects are planned in accordance with current policies and procedures.

**Description.** The principles and policies guiding the plan formulation and evaluation process are discussed in a series of short presentations by HQUSACE staff and through class participation in small group exercises. Presentations and class exercises focus on case studies designed to illustrate the planning process and application of guidance and policy. The course presents the basic procedures that enable the student to conduct the planning process under today's requirements. The course covers interaction among the district, division, HQUSACE, Army, and the Administration, and includes a session on new directions in planning. The course is conducted in an informal atmosphere to encourage class interaction.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: selected 0020, 0100, 0400, 0800, and



1300; (b) Grade: GS-05 or above. Participants should be familiar with ER 1105-2-100, Guidance for Conducting Civil Works Planning Studies, and be currently involved in civil works planning.

Session	Location	Date
2001-1	Denver, CO	5/7/2001 5/11/2001

### PLN/DES DEEP NAV CHN

**Long Title:** *Planning, Design, and Maintenance of Deep Draft Navigation Channels*

**346**                      **Length: 36 Hours**                      **35DDN01A**  
**CEUs: 3.2**

**Purpose.** This course provides the most recent guidance for planning, design, and maintenance of deep-draft ship channels, including approved revisions to the relevant Engineer Manual (EM). The course provides insights and understanding that benefit project managers, planners, engineers, and operations personnel involved with navigation projects.

**Description.** HQUSACE, division, and laboratory personnel present and discuss the latest policy issues, planning guidance, and design procedures. Text for the course is EM 1110-2-1613, Hydraulic Design of Deep-Draft Navigation Projects, which is currently being revised to include the latest research products. The course provides a forum for attendees to exchange project-related experiences with their peers. Informal activities provide opportunities for one-on-one discussions of important issues with lecturers and fellow attendees. The following topics are addressed: (a) planning considerations for determination of channel dimensions; (b) procedures for screening channel improvement alternatives; (c) ship characteristics and maneuvering constraints that must be considered in determining channel dimensions and special features; (d) ship and navigation considerations for determining channel dimensions; (e) layout and design of the selected channel improvement alternative; (f) determination of aids-to-navigation requirements; (g) maintenance considerations in the planning and design process; (h) channel maintenance alternatives; (i) introduction to environmental considerations; (j) workshops, using the WES Ship Simulator, and (k) case studies.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: Selected 0800 and 1300 series personnel with current or planned involvement in the project management, planning, design, construction, operation, or maintenance of deep draft, navigation channels; (b) Grade: GS-07 or above.

### PROBINGEOTECHENGR

**Long Title:** *Probability and Reliability in Geotechnical Engineering*

**279**                      **Length: 36 Hours**                      **35PRG01A**  
**CEUs: 0.0**    **Tuition: \$2,160.00**

**Purpose.** Corps of Engineer policy stipulates that reliability analysis will be used in major rehabilitation projects. This course trains civil engineers who have responsibilities in geotechnical, HTRW, or structure design fields in the area of reliability analysis.

**Description.** Through a series of lectures and practical exercises, students will study element of probability, distribution models, reliability analysis, and parameter estimates. Using case histories as examples, students will also examine applications of reliability analysis to seepage, slope stability, and compressibility analysis.

**Prerequisites.** (a) Occupational series: 0810, Civil Engineer; (b) Grade: GS-07 and above; and (c) This course is meant primarily for those civil engineers with geotechnical, HTRW, or structure design responsibilities.

Session	Location	Date
2001-1	Vicksburg, MS	4/2/2001 4/6/2001

### PROJ MGT - CIVIL WORKS

**Long Title:** *Project Management - Civil Works*

**353**                      **Length: 24 Hours**                      **46PMC01A**

**Purpose.** This course provides the district project manager with management procedures and techniques necessary to deliver a successful civil works project.

**Description.** Through lectures, case studies, and exercises, this course covers the entire spectrum of management of civil works projects. It includes the organization, team, procedures, and customer relationships involved in moving a project successfully through the civil works process. It also addresses project management requirements in ER 5-1-11, Program and Project Management.

**Prerequisites.** (a) Grade: GS-11 and above; (b) Successful completion of PROSPECT Project Management course (#355); (c) Other: First priority should be given to personnel currently assigned as a civil works project manager. Second priority should be given to personnel currently assigned to a civil works project team.

### PROJ MGT - HTRW & OE

**Long Title:** *Project Management for Hazardous, Toxic and Radioactive Waste (HTRW) and Ordnance and Explosives (OE) Environmental Restoration*

**260**                      **Length: 36 Hours**                      **46ENV01A**  
**CEUs: 3.0**    **Tuition: \$1,260.00**

**Purpose.** District project managers, and others, will learn the Corps' requirements, policy and procedures for managing projects that control, remove or treat











## PUBLIC INVOLVE COMM

### *Long Title: Public Involvement - Communication Skills*

**091**                      **Length: 36 Hours**                      **53PIC01A**  
**CEUs: 0.0**    **Tuition: \$1,120.00**

**Purpose.** This course is for staff whose responsibilities require communicating with the public about agency activities. The purpose of the course is to present the rationale for public involvement in Corps of Engineers activities and to present basic communications and group process techniques to enable Corps employees to more effectively interact with the public.

**Description.** The course utilizes team workshops, lectures, and case studies to present and demonstrate the utility of a wide-range of formats, techniques, and methods for public involvement. Topics covered in this course are: the public's role in decision-making; applying public involvement in Corps of Engineers activities; defining agency value systems; distinguishing policy (political) from technical decisions; designing a public involvement program; facilitation and small group leadership skills; listening and sending skills; designing public meetings and workshops; the role of values in public involvement; and dealing with conflict.

**Prerequisites.** Nominees should be assigned (a) Occupational Series: selected 0100, 0020, 0021, 0023, 0025, 0026, 0300, 0400, 0800, 1000 and 1300; (b) Grade: GS-05 through GS-11 (water resources planners, study managers, project managers, rangers, park managers etc) - anyone potentially involved with public involvement during the planning, design, construction or operation of a project.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2001-1	Huntsville, AL	7/23/2001 7/27/2001

## RAD WASTE PKG, TRANSP&DISP

### *Long Title: Radioactive Waste Packaging, Transportation and Disposal Workshop*

**441**                      **Length: 24 Hours**                      **56RWP01A**  
**CEUs: 0.0**    **Tuition: \$840.00**

**Purpose.** This workshop enables Corps of Engineers personnel to understand the Department of Transportation regulatory requirements associated with the shipping of Class 7 radioactive wastes.

**Description.** This workshop is designed to instruct the student on the Department of Transportation (DOT) requirements pertaining specifically to radioactive wastes, in particular, wastes from FUSRAP sites. This course is highly focused on the DOT requirements and regulations associated with Class 7 radioactive wastes. Course contents include, but are not limited to, determining if the material meets a Class 7 hazard class, DOT subtyping, determining the proper packaging,

labeling, marking, and shipping paper requirements for class 7 materials. In addition, radiation levels and package contamination levels are discussed. There is minor discussion on the Nuclear Regulatory Commission (NRC) regulations as they relate to the course in transportation. (NOTE: A scientific calculator must be brought to class.)

**Prerequisites.** Students are advised that an extremely helpful prerequisite would be Hazardous Waste Management and Manifesting PROSPECT Course #223. This is not a required course, however course #223 must be taken if the student transports hazardous materials and hazardous wastes, other than Class 7 wastes.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2001-1	Newark, NJ	11/28/2000 12/1/2000

## RE ACQUISITION

### *Long Title: Real Estate Acquisition*

**079**                      **Length: 36 Hours**                      **49REA01A**  
**CEUs: 3.0**    **Tuition: \$1,180.00**

**Purpose.** The real estate acquisition mission of the Department of the Army has no counterpart in the private sector. The laws, regulations, and policies pertaining thereto are peculiar to acquisition of real estate by the Federal Government or in conjunction with Federal projects. This course provides a basic overview of the land acquisition policies, procedures, and regulations for Army and Corps of Engineers projects.

**Description.** The course includes lectures, class discussions, problem solving, and testing. Topics for presentation address project planning procedures, elementary mapping, planning documents, title evidence, just compensation, condemnation, fundamentals of appraisal, relocation of people and businesses under P.L. 91-646, estates in land, leasing procedures, local cooperation and cost-sharing, utility relocations, environmental considerations, negotiation skills, preparation of negotiator's reports, acquisition agreements, and crediting for land provided by project sponsors. After completing this course, the student should have a foundation upon which, with additional study and experience, a knowledge base in real estate acquisition can be built.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: 0318, 0905, 1101, 1170, and 1171; (b) Grade: GS-12 and below. Attendees must be either actively engaged in real estate activities or contemplating a career in real estate.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2001-1	San Antonio, TX	5/21/2001 5/25/2001
2001-2	San Antonio, TX	3/19/2001 3/23/2001



## RE APPRAISAL/LEASING

**Long Title:** *Real Estate Appraisal in Leasing*

**102**                      **Length: 36 Hours**                      **49RAL01A**  
**CEUs: 3.0**    **Tuition: \$1,200.00**

**Purpose.** This course provides appraisers and realty specialists with basic skills in preparing appraisal reports, planning documents, and in leasing of buildings, building space, residential quarters, and other real estate required for military projects.

**Description.** The course includes lectures, class discussions, practice exercises, a field trip, and testing. Topics for presentation will address (a) what is an appraisal, how is it used, and who uses it?; (b) terminology, definitions, and structure of the appraisal report; (c) three approaches to value, sales comparison, cost, and income; (d) use of grids, spreadsheets, formulas, and reconciliation of approaches; (e) completion of appraisal for military in-lease appraisals (\$24,000 or less); (f) review of the Uniform Standards of Professional Appraisal Practice (USPAP); (g) leasehold authorities, regulations, and leasing procedures; (h) leasehold estates and forms, including mandatory and optional clauses; (i) preparing and using acquisition reports, environmental baseline studies, economic analyses, standard lease acquisition packages, and planning reports; (j) lease negotiations; and (k) lease administration.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: 0905, 1101, 1170, and 1171, and other related series; (b) Grade: GS-05 or above; (c) personnel primarily assigned to real estate functions.

Session	Location	Date
2001-1	Nashville, TN	4/2/2001 4/6/2001

## RE BASIC - OUTGR/DISP

**Long Title:** *Real Estate Basic Outgrants and Disposals*

**007**                      **Length: 36 Hours**                      **49RED01A**  
**CEUs: 0.0**    **Tuition: \$1,150.00**

**Purpose.** This course is designed for new realty specialists and to provide a detailed understanding of routine outgrant and disposal procedures and methods.

**Description.** Course topics include: (a) procedures for placing real property in excess status; (b) GSA disposal with SF 118 forms; (c) agency disposal; (d) special authority disposal; (e) outgrant preliminary procedures such as availability, environmental processes, competition, authorities, forms, and delegation; (f) outgrant documentation preparation; (g) outgrant management; and (h) outgrant administration with actual case studies.

**Prerequisites.** Nominees should be in the Realty Series 1100 or the Attorney Series 905; Grade: GS-05 and above; currently assigned to management and disposal work. Individuals outside of prerequisite occupational series and grade and those actively engaged in real estate activities (such as natural resource specialists, outdoor recreation planners, park managers, the master planning series, and installation DPW staff) will be considered on a space available basis. Nominees should have a general understanding of the Corps of Engineers organizational structure and have read the Real Estate Handbook, ER 405-1-2, Chapter 8 and 11.

Session	Location	Date
2001-1	Savannah, GA	3/26/2001 3/30/2001
2001-2	Phoenix, AZ	12/4/2001 12/8/2001

## RE CONDEMNATION

**Long Title:** *Real Estate Condemnation*

**133**                      **Length: 28 Hours**                      **49REC01A**  
**CEUs: 1.9**    **Tuition: \$1,150.00**

**Purpose.** This course familiarizes condemnation attorneys and realty specialists with all facets of condemnation.

**Description.** Topics include preparation of condemnation assemblies, appraisals, assistance in preparation for trial, trial of cases, post-trial review, and Equal Access to Justice Act (EAJA).

**Prerequisites.** Nominees must be assigned (a) Occupational Series: 0905, 1170, and selected others; (b) Grade: GS-09 or above.

Session	Location	Date
2001-1	Western	6/12/2001 6/15/2001

## RE MGT AND DISPOSAL

**Long Title:** *Real Estate Management and Disposal*

**073**                      **Length: 32 Hours**                      **49RMD01A**  
**CEUs: 0.0**    **Tuition: \$1,110.00**

**Purpose.** This course (a) provides an overview of the established M&D program functions as well as more recent administration Army initiatives; (b) provides guidance on the implementation of AR 405-80, AR 405-90, ER 405-1-12, and on more complex policies and requirements of Executive Orders, statutes, CFRs, etc.; and (c) discusses real estate's role in the military and civil works missions.

**Description.** This course is conducted utilizing a variety of instructional methods where student participation is expected. Subject matter includes: (a) an explanation of ARs, and USACE regulatory guidance; (b) the overall civil and military outgrant program and, specifically, agricultural and grazing, commercial concessions and alternative leasing; (c) civil works and military compliance inspection; (d) land, building, timber, and other



real property disposals; (e) identifying and resolving encroachments; (f) changes in policies and regulations affecting management and disposal functions and contract interpretation, and (g) environmental considerations.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: 0905, 1170 and 1171; (b) Grade: GS-09 and above; (c) attendees must be actively engaged in real estate; (d) individuals outside of prerequisite occupational series and grade and those actively engaged in real estate activities (such as natural resource specialists, outdoor recreation planners, park managers, the master planning series, and installation DPW staff) will be considered on a space available basis; (e) Recommend that RE Basic Outgrants and Disposals be completed prior to this course.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2001-1	Portland, OR	5/7/2001 5/10/2001
2001-2	Portland, OR	6/4/2001 6/7/2001

### RE PLAN & CONTROL

**Long Title:** *Real Estate Planning and Control*

**144**                      **Length: 36 Hours**                      **49RPC01A**  
**CEUs: 0.0**    **Tuition: \$1,210.00**

**Purpose.** The planning and control function in Corps of Engineers real estate divisions comprises a myriad of duties and responsibilities. These include long and short range planning of both civil and military real estate programs, resource allocation and management, monitoring program execution, and audit and administrative support activities. This course is designed to orient real estate employees with each of these duties and responsibilities. The course also discusses how P&C interfaces with other elements of the Corps and addresses broad aspects of the fiscal, manpower and planning environments within real estate, the Corps of Engineers, and the Army.

**Description.** The course utilizes lectures, class discussions, exercises and testing. Topics for presentation will address (a) real estate planning, budgeting, and manpower; (b) real estate surveying, land descriptions, and boundary monumentation; (c) real estate audits/records; (d) real estate environmental considerations and impacts; (e) real property accountability; and (f) real estate aspects of Life Cycle Project Management.

**Prerequisites.** Nominees must be assigned (a) real estate division; (b) Grade: GS-05 and above.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2001-1	Las Vegas, NV	8/13/2001 8/16/2001

### RERELOC ASSISTANCE

**Long Title:** *Real Estate Relocation Assistance and Benefits*

**193**                      **Length: 24 Hours**                      **49RRT01A**  
**CEUs: 0.0**    **Tuition: \$1,130.00**

**Purpose.** This course provides personnel with standardized instruction on the law, uniform regulations, and Corps policies and procedures employed in providing relocation assistance benefits to persons displaced as a result of acquisition of real property for federally-funded and federally-assisted projects.

**Description.** The course is conducted as a seminar including lecture, review, case studies, and open discussions. Topics include a full discussion of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (Title PL 91-646 as amended by Title IV PL 100-17), including its legislative history. Also included is a review of Corps legal and policy interpretations on the provisions of said Act; post authorization planning, scope of advisory services to be provided displacees; methods for calculating and/or justifying the various payments; procedures for completing and processing application forms; and procedures for processing appeals.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: 0905, 1170, or 1171; (b) Grade: GS-05 through GS-13. Attendees must be actively engaged in advising displacees as to relocation assistance benefits or monitoring of a sponsor in implementing this section of the law or be serving in a supervisory or review capacity in matters related thereto.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2001-1	San Diego, CA	11/14/2000 11/16/2000

### REAL PROP MGT

**Long Title:** *Real Property Management*

**286**                      **Length: 32 Hours**                      **49RPM01A**  
**CEUs: 2.9**    **Tuition: \$700.00**

**Purpose.** This course is designed as an introduction to Army Real Property Management, as well as a means to providing Army Real Property personnel up to date information on changes and issues relating to the responsibilities, regulations, policies, and procedures of Army Real Property Management. The goal of the course is to provide an overall understanding for the new real property person and also to enhance the experienced real property person's knowledge of the functions of Army Real Property Management.

**Description.** This course provides the most up to date information on the very broad range of Army real property management responsibilities. Through lectures, case studies, group interaction and practical exercises, this course will provide the most current information on Army real property accountability, to include requirements of the Chief Financial Officers Act for Real Property Accountability and Reporting, space utilization, acquisition, disposals, outgrants, natural and cultural resource requirements and environmental documentation, the McKinney Homeless Assistance Program, annexation, jurisdiction, encroachments, privatization, and automated management systems associated with Army real property management and







components of the Visitation Estimation and Reporting System (VERS) are discussed. Upon completing the course, participants will be able to prepare project survey plans and train staff in traffic-stop procedures.

**Description.** This course is required (in accordance with ER 1130-2-550) prior to setting up and conducting visitor estimation surveys and covers the following topics: (a) recreation use units of measure; (b) project resource settings; (c) development of project survey plan; (d) facilitator training for "Visitor Surveys for Developed Recreation Areas" exportable training module; (e) traffic-stop survey procedures; (f) onsite dispersed-use estimation procedures; (g) case study exercises; (h) application of visitor use information; and (i) introduction to VERS microcomputer programs. Students should possess basic computer skills.

**Prerequisites.** Nominees should come from Corps projects or be district/division personnel involved in natural resource management programs, project survey coordinators, or staff responsible for visitation data collection and reporting. Participants should have a basic understanding of Corps visitation reporting requirements. Students are required to bring a project brochure and maps that indicate a clear location of roadway networks and meter locations, a descriptive listing of visitation not included in current meter locations, a copy of the most recent project monthly visitation report, a listing of all recreation areas identified in the project's Natural Resource Management System (NRMS), and a project survey plan if one has been prepared.

## REGULATORY I

**Long Title:** *Regulatory I*

**100**                  **Length: 36 Hours**                  **35RG101A**  
**CEUs: 0.0**                                      **Tuition: \$960.00**

**Purpose.** This course provides a comprehensive background in the regulatory program and an understanding of current regulatory policies and procedures.

**Description.** This course covers a broad range of topics that personnel in the regulatory program must be familiar with in order to do an effective job. Topics to be covered include (a) Background and Program Overview; (b) Permit Process; (c) Jurisdiction; (d) Reviewing and Assessing Applications; (e) 404(b)(1) Guidelines; (f) Compliance and Enforcement; (g) Site Inspection; (h) NEPA Compliance; (i) Special Policies and Procedures; (j) Construction Method; (k) Decision-Making Process/Public Policy Process; (l) Permit Documentation; (m) General Permits; and (n) Conflict Management/Public Involvement.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: 0200 and selected 0100, 0300, 0400, 0800, 1300, and selected others; (b) other: Nominees should work in the regulatory functions program. However other Corps employees required to support regu-

lators could benefit from this course. Only regulators can be assigned priority 1.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2001-1	Jacksonville, FL	4/23/2001 4/27/2001
2001-2	Denver, CO	6/25/2001 6/29/2001

## REGULATORY IIA

**Long Title: Regulatory IIA - Procedural Issues**

**322**                      **Length: 36 Hours**                      **35IIA01A**  
**CEUs: 0.0**                      **Tuition: \$950.00**

**Purpose.** This course provides an in-depth discussion of the procedural issues related to the more complicated laws, regulations, and policies which Corps regulators are called upon to enforce.

**Description.** The course covers historic properties, endangered species, scope of analysis, civil works projects, Section 404(c), takings, ocean/inland testing, and administrative appeals.

**Prerequisites.** Nominees must have attended the Regulatory I training course. Only regulators can be assigned priority 1. Other Corps employees required to support regulators, as well as people in other agencies having regulatory responsibilities, could benefit from this course.

**TARGET AUDIENCE.** Supervisors, project managers, enforcement officers, journeyman level regulators with a minimum of 2 years experience in grade level GS-07 and above.

**Notes.** All students attending Regulatory II-A or II-B training courses should have experience in the Corps Regulatory Program. A portion of each course will attempt to capitalize on student experiences by asking students to come to class prepared to discuss with the class, their own regulatory experiences (case examples), which deal with one of the topics covered in the course. The case examples should be written (1 page single spaced) and turned in at the beginning of the class. Instructors may select these papers for duplication and distribution to the class. Students who do not submit papers will be required to discuss a case with the class.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2001-1	Huntsville, AL	10/23/2000 10/27/2000
2001-2	Denver, CO	7/23/2001 7/27/2001

## REGULATORY IIB

**Long Title: Regulatory IIB - Decision Making**

**323**                      **Length: 36 Hours**                      **35IB01A**  
**CEUs: 0.0**                      **Tuition: \$960.00**

**Purpose.** This course provides in-depth discussion of the more complex decisions that must be made throughout a permit evaluation, leading to a reason-



able and timely final permit decision.

**Description.** The course covers business perspective, excavation rule, jurisdictional determination, exemptions, solid waste, general permits, wetland delineator program, wetlands management, mitigation, cumulative impacts assessments, alternatives analysis, 404(b)(1) guidelines, public interest review, and 404(q).

**Prerequisites.** Nominees must have attended the Regulatory I training course. Only regulators can be assigned priority 1. Other Corps employees required to support regulators, as well as people in other agencies having regulatory responsibilities, could benefit from this course.

**TARGET AUDIENCE.** Supervisors, project managers, enforcement officers, and journeyman level regulators with a minimum of 2 years experience in grade level GS-07 and above.

Session	Location	Date
2001-1	Huntsville, AL	1/29/2001 2/2/2001
2001-2	Norfolk, VA	6/11/2001 6/15/2001

### REGULATORY III

**Long Title:** *Regulatory III - Compliance & Enforcement*

**325**                      **Length: 36 Hours**                      **35GR301A**  
**CEUs: 2.9**    **Tuition: \$1,010.00**

**Purpose.** This course provides a detailed discussion on enforcing the regulatory statutes administered by the Corps of Engineers.

**Description.** The course covers statutory authorities, violations, enforcement and compliance, conducting investigations, collecting evidence, enforcement actions, civil litigation, criminal enforcement, penalties, and interagency cooperations.

**Prerequisites.** All Corps regulators and Corps Counsel involved in compliance and enforcement actions. GS-07 and above with 1 year experience in the regulatory program.

Session	Location	Date
2001-1	Albuquerque, NM	3/5/2001 3/8/2001
2001-2	Huntsville, AL	7/23/2001 7/26/2001

### REGULATORY IV

**Long Title:** *Regulatory IV - Interagency Wetlands Identification & Delineation*

**140**                      **Length: 36 Hours**                      **35RG401A**  
**CEUs: 0.0**    **Tuition: \$1,620.00**

**Purpose.** Regulatory IV is an interagency course in wetland delineation based on the current Federal Wetland delineation manual. It provides the student with a basic understanding of the interaction of vegeta-

tion, soils, and hydrology in wetlands in sufficient detail to apply delineation methods on routine cases. Upon completion, successful graduates will possess the background necessary to identify wetlands and determine their boundaries for purposes of administering programs such as the Section 404 Regulatory Program. Successful completion is determined by attendance and participation in all lecture, field, and laboratory sessions.

**Description.** Topics include (a) wetland characteristics (including soils, hydrology, and vegetation); (b) wetland delineation methods; and (c) field exercises in recognition of wetland boundaries.

**Prerequisites.** Agency personnel of the Corps, EPA, NRCS and FWS who are involved in the delineation of wetlands will be assigned Priority 1. Other federal, state, local and tribal entities and their agency employees can benefit from the course on a priority 2 and 3 basis. Appropriate field clothes are required.

**Notes.** This course contains requirements which are mandatory for course completion and may require an estimated 8 hours of overtime. It is your responsibility to bring this to the attention of your supervisor so that an overtime request can be made by your appropriate personnel. It is also your responsibility to certify the amount of time expended on these requirements to your supervisor when you request overtime compensation.

Session	Location	Date
2001-1	Mobile, AL	4/2/2001 4/6/2001

### REGULATORY V

**Long Title:** *Regulatory V - The Hydrogeomorphic Approach for Assessing Wetland Functions*

**137**                      **Length: 36 Hours**                      **35RG501A**  
**CEUs: 0.0**    **Tuition: \$1,650.00**

**Purpose.** Regulatory V is an interagency course designed for employees of federal agencies involved in assessing wetland functions in the field. The objective of the course will be to ensure students are as proficient as possible in applying regional subclass models and in evaluating their results. The course will focus on the application of models under different scenarios such as project impact assessment, alternative analysis, and mitigation design/monitoring associated with implementation of regulatory programs such as the Clean Water Act and the Food Securities Act. Successful completion of the course is determined by attendance and participation in all lecture, field, and laboratory sessions.

**Description.** Topics include overview of the Hydrogeomorphic Approach; developing Assessment Models and Regional Guidebooks; verifying, validating, and testing Assessment Models and Regional Guidebooks.



**Prerequisites.** Agency personnel of the Corps, EPA, NRCS, FWS, and FHWA who are involved in the evaluation of impacts associated with regulated or unauthorized activities in wetlands will be assigned Priority 1. Other Corps and outside agency employees can benefit from this course on a priority 2 or 3 basis. Appropriate field clothes are required.

**Notes.** This course contains requirements which are mandatory for course completion and may require an estimated 8 hours of overtime. It is your responsibility to bring this to the attention of your supervisor so that an overtime request can be made by your appropriate personnel. It is also your responsibility to certify the amount of time expended on these requirements to your supervisor when you request overtime compensation.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2001-1	Central	7/9/2001 7/13/2001

## REGULATORY VII

*Long Title: Regulatory VII*

**436**                      **Length: 24 Hours**                      **35RG701A**

**Purpose.** The Regulatory program changes rapidly. New Laws enacted by Congress have significant impact on the program. This workshop provides a regular forum to discuss and incorporate these changes into the program.

**Description.** Many of the topics to be covered in this course are covered in other Regulatory courses. However, senior regulators are not able to attend all of these courses. Topics are subject to change as Congress shifts its focus but could include: Flexibility in Regulatory, Regulatory Takings, Administrative Appeals, Tribal Issues and Responsibilities, Environmental Protection, or other Regulatory matters subject to the influence of Congressional action.

**Prerequisites.** Regulatory Chiefs, Branch Chiefs, Senior Regulatory Team Leaders, Chief of Operations, or those individuals responsible for maintaining a viable Regulatory program. Individuals should have a minimum of 5 years of experience in the Regulatory program at the Grade Level of GS-09 or above.

## REMOTE SENSING-FUND

*Long Title: Remote Sensing - Fundamentals*

**196**                      **Length: 38 Hours**                      **35RSF01A**

**Purpose.** This is a lecture-lab demonstration course designed to provide an understanding of the fundamentals of remote sensing technology as it is applied to environmental phenomena. The course stresses the basics of remote sensing, including information about the nature of light and optics, the classical properties of electromagnetic waves and their interaction with matter, and a review of radiation heat transfer.

The working principles of primary remote sensors are discussed and include an overview of sensors and sensor platforms. An introduction to weather and earth resources satellites is included. Photogrammetry is not included in this course.

**Description.** The course is broken down into three parts: (a) the first part deals with energy and matter relationships: (1) concept of force fields, (2) geometrical optics, (3) properties of electromagnetic waves, (4) review of black body radiation laws, and (5) energy-matter interaction and atmospheric interaction; (b) the second part deals with the technical aspects of the primary sensors in operation: (1) electro-optical systems (nonphotographic), (2) radar imagers, (3) passive microwave imagers, (4) infrared, visible, and ultraviolet imagers, and (5) thermal scanners; and (c) the third part deals with the demonstration of data processing techniques, image interpretation, and techniques for optically enhancing, enlarging, and clarifying imagery. The demonstration of remote sensing applications covers: (1) land use, forestry, geography, geology, hydrology, meteorology, oceanography, etc.; (2) a general discussion with participants of COE mission areas for which remote sensing is relevant; and (3) discussion of entry of unprocessed and processed imagery into spatial data bases including a brief introduction to vector and raster concepts and conversion between them.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: Selected 0400, 0800, and 1300; (b) Grade: GS-07 through 12. Nominees are, or will be, involved in the acquisition interpretation and application of remotely sensed data.

## RESERVOIR ANALYSIS

*Long Title: Reservoir System Analysis*

**098**                      **Length: 36 Hours**                      **35RSA01A**

**Purpose.** A primary objective of the course is to provide participants with a capability to make reservoir system studies using computer simulation to analyze reservoir system performance.

**Description.** Reservoir simulation for flood control, water supply, hydropower and multipurpose operation is covered. Computer program HEC-5 and the new HEC-RSS will be used for reservoir simulation problems. An introduction to system optimization with HEC-PRM will also be presented. In addition to reservoir simulation by computer, the course covers topics related to developing flow data and system demands, plus formulating and evaluating alternative systems.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: Selected 0800 and 1300; (b) Grade: GS-07 or above. A basic level of understanding is required in hydrology, hydraulics, and reservoir regulation. Three or more years of professional work experience in hydraulics and hydrology or in water resources



planning with emphasis in hydrologic and hydraulic studies, meets this level of understanding. In addition, it is required that course participants be in positions where they will be involved in reservoir system studies within the next year or two.

### RIPARIANECOL/MGT

**Long Title:** *Riparian Zone Ecology, Restoration, and Management*

**281**                      **Length: 36 Hours**                      **33REM01A**  
**CEUs: 0.0**    **Tuition: \$1,970.00**

**Purpose.** This course addresses planning and management issues that pertain to riparian (streamside) ecosystems in a variety of ecological and geographical settings. Emphasis is placed on the ecology, restoration and stewardship of riparian habitats associated with Civil Works projects and activities. Students will receive instruction on the functions and ecological importance of riparian zones, conservation needs, potential impacts resulting from various land use practices, and restoration and management techniques that can be applied to maintain or improve riparian systems.

**Description.** Through a series of lectures, practical exercises, and field activities, students will be introduced to the following topics: (a) riparian classification (including regional variation); (b) riparian functions, values, and trends; (c) riparian ecology (fluvial geomorphology, vegetation, fauna; will include sessions on aquatic biology, threatened and endangered species, and the importance of riparian zones to neotropical migrant birds); (d) inventory and monitoring techniques; (e) impacts (hydrologic changes, vegetation modification, exotic species, agricultural practices, bank erosion, non-point source pollution); (f) restoration methods; and (g) management strategies (including development of appropriate designs for corridors and buffer strips). Field trips will be taken to several locations to examine riparian habitats and demonstrate inventory, restoration, and management techniques. Case studies will be presented on riparian issues at Civil Works projects and military installations.

**SUBJECTS AND LEARNING OBJECTIVES.** Students will be able to characterize riparian habitats, understand the functions and values of these habitats, and make the most appropriate decisions regarding their restoration, use, conservation, and management from an ecosystem perspective. Students will be taught state-of-the-science techniques and procedures for collecting, analyzing, and displaying ecological data needed to understand and manage riparian systems. Applicable laws, regulations, and agency policies will be reviewed. Students will be able to identify specific techniques and procedures for inventorying, assessing, analyzing, and evaluating the status of riparian resources and associated impacts upon these resources.

**Prerequisites.** Nominee assignments should be: (a) primarily technical personnel whose duties involve the identification, evaluation, analysis, protection or management of ecological resources. Project and Program Managers responsible for project and program management activities, particularly those involving ecosystem restoration, would also benefit; (b) Occupational series: 0020's, 0150, 0185, 0190, 0198, 0400's, 0800's, 1023, 1350 to include physical scientists, environmental protection specialists, and hydrauligists; and (c) Grade: GS-09 or above. Disciplines (other than the above) may be accepted provided nominee's present or anticipated duties involve the management, analysis, identification, protection, or evaluation of ecological/natural resources.

**Notes.** SPECIAL INSTRUCTIONS. This course involves hands-on field exercises. Therefore, students should prepare to work in riparian and aquatic environments and should bring appropriate shoes and clothing.

**NOTE.** This course contains requirements that are mandatory for course completion and may require an estimated 8 hours of overtime. It is your responsibility to bring this to the attention of your supervisor so that overtime request/determination can be made by your appropriate personnel. It is also your responsibility to certify the amount of time expended on these requirements to your supervisor when you request overtime compensation.

Session	Location	Date
2001-1	Vicksburg, MS	6/4/2001 6/8/2001

### RISK ANALYSIS-WRP&M

**Long Title:** *Risk Analysis for Water Resources Planning and Management*

**349**                      **Length: 36 Hours**                      **35RAW01A**  
**CEUs: 3.1**    **Tuition: \$1,360.00**

**Purpose.** This course introduces concepts of risk analysis into Corps of Engineers planning studies and extends these concepts to studies for structural rehabilitation and for management and operations of existing projects. Risk analysis is an evaluation framework, joined with benefit-cost analysis, to formally introduce mechanisms for evaluating alternative solutions under conditions of risk and uncertainty (R&U). Many techniques are already in use by Corps analysts, but are not applied in systematic and uniform manner. New methods and analytical models have been developed, along with a body of information on risk perception and communication that will also be transferred to practice.

**Description.** Risk analysis is an integral component of Corps of Engineers planning, much as benefit-cost analysis is. It affects all technical analysis throughout each step of the planning process. For example, risk perception and communication is an important element of the scoping process. Environmental analysis,



hydrologic analysis, and benefit-cost analysis all require a components of R&U analysis.

In addition, risk-based analysis concepts are being adopted or proposed for use in operations and maintenance; particularly, the evaluation of major rehabilitation and dredging.

Major risk analysis in planning and management topics to be included in this course are (a) concepts, (b) probability and statistics; (c) models for risk analysis; (d) hydrologic and hydraulic risk; (e) risk and reliability in rehabilitation analysis of hydraulic structures; (f) risk in planning and management of maintenance dredging; (g) forecasting uncertainty; (h) benefit-cost uncertainty; and (i) case studies for flood control and navigation planning.

**OBJECTIVES.** Upon successful completion of this training, attendees will be able to (a) identify uses of risk and uncertainty analysis in the six steps of water resources planning; (b) list the difference between risk analysis and uncertainty analysis; (c) identify at least four probability distributions applicable to risk and uncertainty analysis; (d) calculate sample statistics and confidence limits; (e) identify at least three areas of risk common to water resources planning; (f) list at least two computer models useful for estimating and analyzing simulations; (g) describe when to use probabilistic decision analysis methods; (h) describe the difference between risk assessment and risk management and the planner's role; (i) list at least four guidelines to remember to improve risk communication; (j) list at least three key critical risk and uncertainty components typically encountered in a flood control project evaluation; (k) list at least three key critical risk and uncertainty components typically encountered in a navigation project evaluation; (l) work through the application of risk-based benefit-cost analysis for evaluation of major rehabilitation alternatives; (m) describe the use of engineering models in risk-based analysis of planning and management of maintenance dredging; (n) work through the application of risk and uncertainty techniques to a flood control case study; and (o) work through the application of risk and uncertainty techniques to a navigation case study.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: 0020, 0340, 0110, 0801, 1300; (b) Grade: GS-07 through GS-13. This course is designed for planners and engineers. However, other personnel (project managers, operations, regulatory, recreation, etc.) will find it useful in terms of broadly applicable principles, concepts, and analytical tools.

Session	Location	Date
2001-1	Springfield, VA	4/2/2001 4/6/2001

### RISK-BASED ANALYSIS

**Long Title:** *Risk-Based Analysis for Flood Reduction Projects*

209 Length: 36 Hours 33RBA01A

### CEUs:2.6

**Purpose.** This course introduces Corps of Engineers field office staff to risk-based analysis for flood damage reduction projects. Participants will know the methodologies for determining uncertainty in discharge, stage, and damage and how to evaluate project size and performance accounting for the uncertainty in these parameters. Project function, safety, and workability are reviewed to increase awareness of how these issues affect the formulation of project features.

**Description.** The course presents current policy and technical procedures for conducting risk-based analysis of typical flood damage reduction projects such as levees, channels, and reservoirs. Included are lectures and case studies describing procedures for determining uncertainty in discharge-frequency, stage-discharge, and stage-damage relationships for various project site characteristics. Procedures for conducting Monte Carlo simulations for evaluating project reliability and size are described using current software developed for the personal computer. Concepts and procedures are demonstrated and practiced in classroom workshops. Current Corps policy related to risk-based analysis is also discussed. Project function focuses on typical features associated with riverine flood reduction projects. Performance evaluation includes setting levee grade, closure and overtopping strategies, and local operation, maintenance, rehabilitation, replacement, and repair task evaluation. Requirements for interior flood analysis are also presented. Examples and case studies illustrate potential problems and solutions.

**Prerequisites.** Nominees for the course should have experience in the hydrologic, hydraulic, economic, or plan formulation aspects of flood damage reduction projects. Managerial and supervisory personnel are encouraged to attend. Nominees must be assigned (a) Occupational Series: Selected 0000-0100, 0800, and 1300; (b) Grade: GS-09 or above. Nominee should have a basic understanding of concepts, terms, and analysis as presented in Hydrologic Engineering in Planning (057) and Hydraulic Design for Project Engineers and Planners (107).

### RIVER & WETLANDS

**Long Title:** *Hydrologic Analysis for River and Wetland Restoration*

161 Length: 36 Hours 33RAW01A  
CEUs:0.0 Tuition: \$1,920.00

**Purpose.** The primary objectives of the course is to provide participants with an understanding of the role of hydrology in river and wetland restoration and to equip them with the tools for the various hydrologic analyses necessary in planning and design of these features.

**Description.** Hydrologic processes generally control the creation, restoration, maintenance, size and func-



tion of rivers and wetlands. Hydrologic conditions not only affect the quantity and quality of water available but also influence soil conditions, nutrient availability, salinity (in coastal wetlands), and the flora and fauna that develop along rivers and in wetlands. In rvertime restoration the quantity of water available, its seasonal timing and duration, river alignment and exposure are some of the principal considerations influencing habitat and wildlife. In wetland restoration the water budget is of paramount importance. This includes precipitation, evapotranspiration, surface water inflow and outflow, ground water inflow and outflow, and storage. Both rivers and wetlands can be quite different in different regions and within regions. This course will focus on what is different in hydrologic processes and in hydrologic analyses that apply to river and wetland restoration. While methods of analysis for rainfall-runoff, river flow, sediment transport, water quality, groundwater, and water budgets are available for traditional applications their use in restoration studies requires that both input and output be tailored to the unique requirements of restoration. In addition, other, non-traditional hydrologic methods find their application in restoration studies also. The course will present a variety of case studies to demonstrate the hydrologic processes involved in restoration and the application of different methods of analysis.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: Selected 800 and 400 series, 028, 819, 184, 101, 401, and 1301; (b) Grade GS-09 and above. Nominees should be water control managers, hydrologists engineers, environmentalists, biologist, economist, sociologists, ecologist, or study managers.

Session	Location	Date
2001-1	Davis, CA	9/10/2001 9/14/2001

### ROOFING TECHNOLOG-ADV

**Long Title: Roofing Technology - Advanced**

**142 Length: 36 Hours 73RTA01A**

**Purpose.** This course trains specialists for area and resident office staff assignments in the assurance of quality roofing construction. The course provides Corps of Engineers architects and engineers involved in design and construction with the advanced requirements for quality roof design and O&M maintenance techniques.

**Description.** This course trains specialists to perform roofing (a) constructibility reviews of roofing designs; (b) technical reviews of roofing submittals; (c) acceptance reviews of the CQC plan and schedule of roofing applications; (d) testing and inspection during roofing applications; (e) roofing inspections for maintenance and repair procedures; (f) training and supervision in roofing quality assurance; (g) ability to select appropriate roofing systems during the design stage; (h) complete design of complex roofing systems; and (i) com-

pleted roofing specifications. Training includes lecture, workshop, and field application sessions.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: Selected 0801, 0802, 0808, 0809, 0810, 0830, and 0850; (b) Grade: WG-3 and GS-07 or above. Students must have a basic understanding of all types of roofing systems. Basic level information is available through the exportable training course on roofing technology. NOTE THAT THIS IS AN ADVANCED LEVEL COURSE.

### SAFETY/HEALTH-HWS

**Long Title: Safety and Health for Hazardous Waste Sites**

**351 Length: 40 Hours 58SHH01A**  
**CEUs: 0.0 Tuition: \$990.00**

**Purpose.** This course is designed for personnel involved in hazardous waste site and emergency operations and management. This includes, but is not limited to, Superfund (SF), Resource Conservation and Recovery Act (RCRA), Underground Storage Tank (UST) activities, and the Defense Environmental Restoration Program (DERP). The latter includes both the Installation Restoration Program (IRP) and Formerly Used Defense Sites (FUDS) Program.

This course satisfies the requirements mandated by Congress in the Superfund Amendments and Reauthorization Act of 1986 (29 CFR 1910.120 (E), 40 hours off-site.

**Description.** Through lectures, hands-on practical exercises, and examinations, the student will learn to conduct work activities relative to hazardous waste site operation, design criteria, site screening, and a working knowledge of all relevant environmental and occupational safety and health laws/regulations such as, but not limited to, the Occupational Safety and Health Agency (OSHA) Hazardous Waste Operations and Emergency Response Regulations, CERCLA, and RCRA. Specific topics taught include (a) Scope, application, and definitions of hazardous waste operations and emergency response; (b) safety and health programs; (c) site characterization and analysis; (d) site control; (e) training; (f) medical surveillance; (g) engineering controls, work practices, and personal protective equipment for employee protection; (h) monitoring; (i) informational programs; (j) handling drums and containers; (k) decontamination; (l) emergency response by employees at uncontrolled hazardous waste sites; (m) illumination; (n) sanitation at temporary workplaces; (o) new technology programs; (p) certain operations conducted under the Resource Conservation and Recovery Act of 1976 (RCRA); and (q) emergency response to hazardous substance releases by employees.

**SPECIAL REQUIREMENTS FOR SUCCESSFUL COMPLETION OF COURSE.** This course consists of an intense 40 hours of instruction and requires exten-



sive physical exertion. Personnel must have been medically evaluated within the past year by a licensed physician and determined to be physically able to perform the rigors of all required hands-on training and qualified to wear a respirator while wearing Level A, Level B, and Level C protective equipment. Personnel with any medical limitations that will prevent them from completing all hands-on training shall not take this course. Personnel will not be allowed to wear respiratory protective equipment where facial hair comes between the face-piece to face seal or that otherwise may interfere with the valve function of the respirator. This does not exclude all facial hair. For example, closely cropped moustaches and trimmed sideburns are acceptable. Individuals shall conform to this facial hair policy during respirator use. Personnel not meeting this requirement shall not be issued a course completion certificate. Personnel are required to wear personal protective equipment under simulated work conditions and must perform all exercises to receive 40-hour certification.

**Prerequisites.** Nominees should (a) be directly involved in hazardous waste site and emergency operations and management including, but not limited to, quality assurance, Corps drill and survey crews, geologists, Preliminary Assessment/Site Investigation (PA/SI) team members, emergency responders, and safety and health; (b) have a degree in engineering or a scientific discipline or have practical experience in hazardous waste site operations; and (c) have completed all requirements listed under the SPECIAL REQUIREMENTS paragraph above before arriving at the course site.

A hands-on demonstration with personal protective equipment (PPE) including respirators will be conducted as part of this course. The instructor will call upon volunteers to don PPE and respirators. Volunteers who don respiratory protective equipment shall be clean shaven. Clean shaven is defined as “no facial hair between the sealing periphery of the face piece to face seal, or that otherwise interferes with the valve function of the respirator.”

Personnel with any medical limitations that will prevent them from completing all hands-on training shall not take this course.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2001-1	Huntsville, AL	3/19/2001 3/23/2001

## SEAGRASS MIT/ECOL WORKSHOP

**Long Title: Seagrass Mitigation, Ecology, Functional Assessment and Restoration Workshop**

**424**                      **Length: 40 Hours**                      **33SME01A**  
**CEUs: 0.0**                      **Tuition: \$1,650.00**

**Purpose.** To identify state-of-the science seagrass ecology and mitigation alternatives (restoration, enhancement, avoidance, minimization and development)

through a series of lectures, practical field problem solving with field trips and highly facilitated discussions involving known experts in the field.

**Description.** This National workshop will focus on “lessons learned” approach to seagrass mitigation based upon linking the latest seagrass science/ecology to formulating mitigation alternatives from a project and program management perspective. Recent changes in the consideration of the avoidance approach to seagrass mitigation alternatives formulation and analysis based on the best available science and technology has resulted in new and innovative approaches to seagrass mitigation based upon National and regional perspectives (SEUSA and Western USA). Past and present peer and non-peer reviewed seagrass literature will be examined. Participants of the workshop will meet the known seagrass mitigation experts in highly facilitated lecture and field problem solving exercises. Case studies of successful and innovative seagrass mitigation work will be examined for application to the Pacific Northwest seagrass mitigation opportunities and challenges.

**Prerequisites.** Project or program management from planning, design, engineering, regulatory, navigation and environmental resources. Disciplines (other than the above) may be accepted provided the nominee's present or anticipated duties involve the management, plan formulation, alternatives identification and analysis or regulation or seagrass resources.

**Special Instructions:** This is a field workshop which will involve “hand on” field exercises. Students should come prepared to work in the marine (salt water environment) and bring appropriate clothing, shoes and boots.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2001-1	Juneau, AK	7/16/2001 7/20/2001

## SEDIMENT TRANSPORT

**Long Title: Sediment Transport in Rivers and Reservoirs**

**122**                      **Length: 36 Hours**                      **35SDT01A**

**Purpose.** This course reviews the principles of open channel hydraulics and provides information on channel aggradation and degradation, sediment transport, and use of numerical models to predict stream behavior.

**Description.** The course prepares engineers to perform moveable boundary hydraulic studies using the computer program HEC-6 "Scour and Deposition in Rivers and Reservoirs." Topics include sediment characteristics and data gathering, sediment transport theories and equations, stream bed armoring, use and calibration of HEC-6 for prediction of stream bed profile changes, reservoir deposition, and maintenance dredging.



**Prerequisites.** Nominees must be assigned (a) Occupational Series: Selected 0800 and 1300; (b) Grade: GS-09 or above. The student should have a working knowledge of open channel hydraulics, particularly step-backwater calculations. Familiarity with HEC-2 input structure and format is also required. In addition, course participants must be in positions or anticipate being in positions where they will be involved in sediment studies within the next year or two.

### SEDIMENTATION ANAL

**Long Title:** *Sedimentation Investigations of Rivers and Reservoirs*

**148**                      **Length: 36 Hours**                      **35SED01A**  
**CEUs: 3.0**    **Tuition: \$2,090.00**

**Purpose.** This course provides Corps of Engineers supervisory and project engineers with practical background and state-of-the-art technical knowledge required to plan, perform, and successfully complete reservoir and inland waterway sedimentation studies.

**Description.** Participants are taught the requirements and techniques for conducting sedimentation studies and analyses as contained in recently revised Engineer Manual (EM) 1110-2-4000, Sedimentation Investigations of Rivers and Reservoirs (draft). The course also affords an opportunity for interchange between engineers involved in practical applications of the recommended engineering techniques. Topics include (a) basic sediment transport concepts and fundamentals; (b) reporting requirements (sediment impact assessment reports, survey reports, design memorandums, post-construction reports, continuing authority studies, and sedimentation reports); (c) formulation and planning of sediment studies (nature and scope of sedimentation engineering, the Sediment Studies Work Plan (SSWP), and development of the SSWP guidelines for determining the degree of detail to be included in the SSWP); (d) sediment yield (need for sediment yield studies, misconceptions, measurement-based sediment yield methods, and predictive-based sediment yield methods); (e) river sedimentation (basic considerations, identification of study requirements, evaluation of study needs, channel geometry and bed form, sediment transport formulas, hydrology, streambank erosion, channel scour and deposition, man-made structural features, channel deterioration, channeling); (f) reservoir sedimentation (influence of project on stream system, reservoir sedimentation problems, data requirements for reservoir sedimentation studies, detailed reservoir sedimentation study, and reservoir sedimentation investigation); (g) sediment measurements and sampling in the field (proper equipment and its use); and (h) model studies (undistorted and distorted and physical models, numerical models, and CORPS).

**Prerequisites.** Nominees must be assigned (a) Occupational Series: Selected 0800 and 1300 with current or planned involvement in sedimentation investiga-

tions of rivers or reservoirs; (b) Grade: GS-07 or above.

**Notes.** This course contains requirements which are mandatory for course completion and may require an estimated 2 hours of overtime. It is your responsibility to bring this to the attention of your supervisor so that an overtime request can be made by your appropriate personnel. It is also your responsibility to certify the amount of time expended on these requirements to your supervisor when you request overtime compensation.

Session	Location	Date
2001-1	Vicksburg, MS	11/6/2000 11/10/2000

### SEEPAGE AND PIPING

**Long Title:** *Seepage and Piping*

**250**                      **Length: 36 Hours**                      **35SEP01A**  
**CEUs: 0.0**    **Tuition: \$1,940.00**

**Purpose.** This course trains Corps of Engineers designers and field engineers for seepage analysis, control, field problems in dams, levees, retaining walls, and slopes. This course is for both young and experienced engineers. The course uses criteria in EM 1110-2-1901 and TM 5-818-5, supplemented by field experience.

**Description.** The course will cover the principles of seepage through soils, related problems with erosion and piping, and methods for preventing and mitigating these problems. Specific topics will include Darcy's law, permeability of soils, flow nets free surface problems, erosion and piping, filter criteria and remedial measures.

**Prerequisites.** Nominees must be assigned: (a) Occupational Series: Selected 0800; (b) Grade: GS-07 or above; and (c) Others: Employed as soils engineer, geologist, construction engineers, or operation and maintenance engineers.

Session	Location	Date
2001-1	Baltimore, MD	6/25/2001 6/29/2001

### SEISMIC DESIGN BLDGS

**Long Title:** *Seismic Design for Buildings*

**027**                      **Length: 36 Hours**                      **35SDB01A**  
**CEUs: 0.0**    **Tuition: \$1,890.00**

**Purpose.** This course trains structural engineers who are not thoroughly familiar with seismic design. Seismic design technology and design procedures have advanced dramatically in recent years. The Corps seismic manuals have been rewritten to reflect these criteria. Unless our designers are trained in the new design they could be designing building that do not meet the new codes and standards. The Corps designs Army buildings that must meet the latest codes.



At this time, the Corps manuals are the most updated materials available.

**Description.** Through lectures and testing, this course presents (a) introduction of seismic design; (b) seismic design criteria; (c) seismic design procedures; (d) structural elements of (including illustrative examples): (1) diaphragms, (2) walls, (3) frames, (4) masonry, (5) mechanical, electrical, and architectural elements, (6) utility systems; and (e) a one-half day field trip to a construction site/seismically designed building (if practicable). Students will be able to design/review seismic design analyses and drawings more efficiently upon completing this course. The manuals to be used are, TI 809-04, "Seismic Design for Buildings", TI 809-05, "Seismic Evaluation and Rehabilitation for Buildings" Corps Specifications addressing certain aspects of seismic issues and national codes and guidance referenced in the Corps documents.

**Prerequisites.** Nominees must be assigned and/or have all of the following: (a) Occupational Series: 0810 and 0830. Waivers must be submitted for other occupational series; (b) Grade: GS-07 or above. Course is open to Air Force and Navy personnel.

Session	Location	Date
2001-1	Huntsville, AL	8/13/2001 8/17/2001

### SEISMIC STABILITY

**Long Title:** *Seismic Stability of Embankment Dams*

**247**                      **Length: 36 Hours**                      **35SSE01A**

**Purpose.** This course provides Corps of Engineers personnel with the knowledge, skills, and abilities needed for assessing the seismic safety of the Corps dams and other earth structures with state-of-the-art analytical tools and procedures.

**Description.** Through a series of lectures, case studies, and laboratory demonstrations, students will introduced to the following topics: (a) earthquake ground motions; (b) site characterization; (c) site response analysis; (d) liquefaction evaluation; (e) slope stability and deformation; and (f) remediation alternatives.

**Prerequisites.** Nominees must be assigned: (a) Occupational series: 0810; and (b) Grade GS-09 and above.

### SHEAR STRENGTH

**Long Title:** *Shear Strength*

**248**                      **Length: 24 Hours**                      **35SHS01A**

**Purpose.** This course provides geotechnical engineers with the background and knowledge of shear strengths required in stability analysis of embankment dams, levees, and slopes in open cuts or natural ground. Participants completing this course will be well prepared to select appropriate design shear strengths for various cases for which stability analyses

shall be performed. This course compliments and enhances the training in dam safety.

**Description.** The course provides instruction in the following topics: (a) Shear strengths, concepts, failure envelopes, and failure criteria; (b) Shear strengths of cohesionless soils; (c) Shear strengths of cohesive soils: (1) Types of shear strengths (Q,R,R-bar, S strengths, and anisotropically consolidated shear strengths), test procedures, and plotting results; (2) Stress paths and interpretation; (3) Factors affecting tests and strengths; (d) Undrained strength tests and interpretation; and (e) Methods and cases of Corps slope stability analysis and related matters.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: Selected 0800; and (b) Grade: GS-07 or above.

### SMALL BUS UTI

**Long Title:** *Small Business Utilization*

**363**                      **Length: 20 Hours**                      **41SDB01A**  
**CEUs: 0.0**                      **Tuition: \$1,510.00**

**Purpose.** This course develops an understanding of the scope, responsibilities, policies, legislative background, and procedures for developing and executing a successful Small and Disadvantaged Business Utilization (SADBU) program. It is broad in scope and informs attendees of the procedures as well as the long range objectives which support the national industrial base.

**Description.** The course covers the various activities that contribute to a successful SADBU program. Included are overview, legislative history, purpose, interface with the Small Business Administration, program management accountability, responsibility of engineers, program managers, Deputy for Small Business, and contracting officers. The course focuses on development of a viable program to meet various laws, goals, and socioeconomic objectives as well as meeting acquisition planning and contract execution objectives. Participants benefit from the exchange of ideas and an increased understanding of the conflicting priorities which must be resolved in order to carry out the national program objectives. This course is conducted using lectures, case studies, and open forum.

**Prerequisites.** Attendees should be the Deputies for Small Business and their staffs (1102), project/program managers, contracting officers, and contract administrators whose responsibilities include contract award and contract administration. Attendees should have some knowledge of contracting or contract administration achieved through formal training such as PROSPECT or ALMC courses.

Session	Location	Date
2001-1	Huntsville, AL	3/6/2001 3/8/2001



## SOIL STRUC INTERACT

**Long Title:** *Soil-Structure Interaction Analysis*

**113**                      **Length: 36 Hours**                      **35SSI01A**  
**CEUs: 0.0**    **Tuition: \$2,100.00**

**Purpose.** This course trains Corps of Engineers civil engineers to use soil structure interaction analyses for strip footings, mat foundations, single piles, sheet pile walls, and reinforced concrete structures.

**Description.** The course covers the fundamentals of soil-structure interaction (SSI) analyses and their application to Corps-type problems. Finite difference and finite element computer programs available for the soil-structure interaction analysis are explained. Both 1-D and 2-D problems are covered. Examples of Corps-type problems are solved using SSI techniques. Workshop sessions provide the participants an opportunity to use computer programs that utilize SSI techniques. The new PC based SSI computer program will be demonstrated. After completing this course students will be able to complete difficult designs using computer solutions to soil structure displacement problems.

**Prerequisites.** Nominee must be assigned (a) Occupational Series: Selected 0800; (b) Grade: GS-07 or above. Nominees should be engineers involved in the design of structures and should have some experience in the use of personal computers.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2001-1	Vicksburg, MS	3/26/2001 3/30/2001

## SOIL VAPOR EXTRACTION

**Long Title:** *Soil Vapor Extraction and Bioventing Workshop*

**433**                      **Length: 24 Hours**                      **33SVE01A**  
**CEUs: 0.0**    **Tuition: \$570.00**

**Purpose.** This workshop is intended to provide instruction on: (1) site characterization needs, including pilot testing, for soil vapor extraction (SVE) and bioventing (BV); (2) SVE and BV technology screening; (3) design of SVE and BV systems; (4) operation and maintenance of these systems; and (5) closeout of these systems. The course is intended for individuals responsible for the characterization, design, or construction oversight of SVE and/or BV systems. The course closely follows the USACE Engineer Manual on SVE and BV, EM 1110-1-4001.

**Description.** This workshop will cover topics as presented in EM 1110-1-4001, including technology descriptions and application strategy; physical and biological processes involved in subsurface airflow and vadose zone contaminant removal/degradation behavior; site characterization in support of SVE design; SVE/BV bench/pilot testing approach and data use;

SVE/BV systems design, including above ground piles; SVE/BV system start-up and operations; system shut-down and closeout requirements; cost estimating for SVE/BV system and contracting approaches; regulatory, patent, and safety issues. Related technologies including air sparging, high-vacuum dual phase extraction, and UVB will be described but detailed design guidance will not be provided. Soil vapor extraction and bioventing are applicable to common DOD and EPA problems including sites contaminated with fuels and solvents. The US Army Corps of Engineer Manual 1110-1-4001 is a comprehensive guide to soil vapor extraction and bioventing.

**Prerequisites.** The target audience includes a wide variety of disciplines such as environmental, mechanical, cost and geotechnical engineers, geologists, chemists, technical/project managers, and industrial hygienists. Construction representatives may find the course too design oriented.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2001-1	San Francisco, CA	3/13/2001 3/15/2001

## SPACE UTILIZATION

**Long Title:** *Space Utilization*

**214**                      **Length: 36 Hours**                      **49SUM01A**  
**CEUs: 0.0**    **Tuition: \$850.00**

**Purpose.** This course is designed for space utilization, master planning, real property management and facilities management personnel. The course was developed to provide these personnel with the basic tenants of space utilization management within the U.S. Army. This course has two focuses: (1) to train managers, at all levels, how to determine organizational space allowances and requirements, and to plan and conduct utilization surveys; and (2) to identify ways to increase efficiency through space planning techniques.

**Description.** This course includes lectured instruction, discussions, and exercises which teach students to recognize a poorly utilized or planned facility and to make necessary adjustments. Space utilization will be adjusted through space allowance and requirements analysis of organizations and facilities on the installation. The second half of the course concentrates on improving space utilization by using space planning techniques and by the use of systems furniture. Major topics include (a) Army facility asset database overview; (b) determining organizational space allowances and requirements; (c) planning and conducting a space utilization survey; (d) space planning principles; and (e) qualitative elements of space planning. Each student will receive two manuals containing the course materials. The principal, underlying directive for this course is Army Regulation 405-70, Utilization of Real Property.

**Prerequisites.** This course is open to all civilian and military personnel employed by the US Government. Contractor personnel may be accommodated with special permission. Nominees must be assigned in



Civilian Occupational Series: 0301; 0303, 0322, 1343, 0344, 0801, 0802, 1101, 1170, 1173; Grade: GS-05 or above. Military personnel equivalents should be used to determine eligibility. Students should have worked 1 year or more in a position dealing with the assignment of space on an installation/major facility or the assignment of organization to an installation/major facility. Students should bring a hand held calculator to the course.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2001-1	Huntsville, AL	5/7/2001 5/11/2001

### **SPECS-CONSTR CONTR**

**Long Title: Specifications for Construction Contracts**

<b>185</b>	<b>Length: 36 Hours</b>	<b>35SWC01A</b>
<b>CEUs: 0.0</b>		<b>Tuition: \$720.00</b>

**Purpose.** This course provides instruction for preparing effective specifications for construction projects. The course is designed for engineers, architects, and technicians who write or edit project specifications. The course covers principles of specification writing, procedures and techniques for writing specifications, and relationships of specifications to other elements of the contract documents. This course is strongly recommended for all design and supervisory personnel involved in development of project specifications.

**Description.** Major subject matter topics include (a) language of specifications/written communication; (b) organization and format of specifications; (c) sources of technical information; (d) procedures, techniques, and methods of specification writing and editing; (e) guide specifications and project developed specifications; (f) contract clauses and contract interpretation; (g) relationship of contract drawings to specifications; (h) automated specification methods; and (i) regulatory considerations.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: 0800; (b) Grade: GS-09 through GS-13. Students should have current or projected assignments dealing with preparing project specifications.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2001-1	Huntsville, AL	4/23/2001 4/27/2001
2001-2	Huntsville, AL	6/18/2001 6/22/2001
2001-3	Huntsville, AL	8/13/2001 8/17/2001

### **STATMETHODSHYDRO**

**Long Title: Statistical Methods in Hydrology**

<b>058</b>	<b>Length: 36 Hours</b>	<b>35SMH01A</b>
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**Purpose.** To know how to apply statistical methods that are useful in the analysis and design of flood control and water supply systems. Methods include advanced theory of frequency analysis, distribution fitting and testing, univariate and multivariate regression analysis,

and regional analysis.

**Description.** Topics covered include (a) distribution fitting and testing; (b) mixed population frequency analysis; (c) regulated flood frequency analysis; (d) regional frequency analysis; (e) application of univariate and multivariate regression methods for regional analysis; and (f) time-series analysis.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: Selected 0800, 1300, and 1500; (b) Grade: GS-09 or above. Students should have already taken HEC Flood Frequency Analysis course or equivalent.

### **STRATEGIC OUTREACH PLN WKS**

**Long Title: Strategic Outreach Plan Workshop**

<b>450</b>	<b>Length: 16 Hours</b>	<b>15SOP01A</b>
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**Purpose.** This workshop focuses on the first phase of the Customer Outreach Cycle—Strategic Outreach Planning. It answers the question: "What is the organization's business development outlook and how to improve it?"

**Description.** This session can be offered in either an 8 hour or 16 hour workshop. The objective of the workshop is to develop an organizational outreach plan. The workshop is designed for onsite presentation at districts and division locations. For more information about an onsite session, please contact Joy Rodriguez, (256) 895-7448.

**Prerequisites.** This workshop is designed for organizational personnel responsible for developing and furthering business relationships with customers within District, MSC, Labs, HQ.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2001-1	DATES AND LOCATION TBD	

### **STREAMBANKEROS/PROT**

**Long Title: Streambank Erosion and Protection**

<b>285</b>	<b>Length: 36 Hours</b>	<b>35SBP01A</b>
<b>CEUs: 3.3</b>		<b>Tuition: \$1,950.00</b>

**Purpose.** This course provides supervisors, project engineers and designers, and senior technicians with the latest practical knowledge and design criteria for streambank protection and erosion control.

**Description.** Participants review river mechanics and geomorphology and problems caused by streambank erosion and streambed degradation and aggradation. The numerous causes of streambank erosion and instability are reviewed to provide guidelines in selecting the proper designs for solving site specific problems. Experienced instructors present lectures and lead discussions, field exercises, and workshops on







used in supporting Corps facility management, environmental restoration, military construction, real estate, navigation, dredging, and construction and operation activities. It is intended for surveyors, engineers, planners, construction inspectors, CADD/GIS developers, A-E contract administrators, or any other technical discipline requiring training on current construction surveying methods.

**Description.** Specific topics covered in the course include the following:

- land area computations and partitioning of tracts
- horizontal curve computations and stake out
- vertical curve computations and stake out
- topographic surveying and mapping using surveying instruments transit, and electronic total station development techniques
- construction surveying, including field practice
- stake out, grading, etc.
- earthwork
- map presentations
- state plane coordinates
- construction control
- pipe/tunnel construction
- culvert and bridge survey layout
- building construction layout
- highway and street layout
- structural deformation surveys of locks and dams

**Prerequisites.** Nominees must be assigned (a) Occupational Series: Surveyors (1300), Engineers, (0800), Planners, Construction Inspectors, CADD/GIS Developers or A-E Contract Administrators (1100); (b) Grade: GS-04 or above; (c) A general working knowledge of high school level mathematics-computations presented in this course will require an understanding of elementary algebra and trigonometry; and (d) A general working knowledge and use of a scientific-type, hand-held calculator is required.

**Notes.** Students are required to bring a scientific-type, hand-held calculator with them to this course. At minimum, the calculator shall have the capability to compute trigonometric functions and convert degree minute-second angular measures to decimal equivalents. Varying instrumentation and field procedures are utilized within USACE Districts; therefore, intensive hands-on field exercises are not an integral part of this course. Field demonstrations on the use of construction survey instrumentation and equipment are conducted throughout this course.

Session	Location	Date
2001-1	Huntsville, AL	6/19/2001 6/22/2001

### SURVEYING III

**Long Title: Surveying III (Topographic and Photogrammetric Data Acquisition and Mapping for Engineering and Construction)**

**296**                      **Length: 36 Hours**                      **35SV301A**  
**CEUs: 2.7**                      **Tuition: \$1,670.00**

**Purpose.** This course provides project managers, designers, surveyors, planners and CADD/GIS developers with and overview of the latest techniques used in acquiring and processing surveying and site plan mapping data for civil works, military construction, and environmental restoration projects. Emphasis is placed on current topographic surveying and photogrammetric mapping techniques (from field to finish) used in developing CADD, GIS, LIS, and AM/FM data bases for design and construction work. Students apply PC-based software to format, translate, and transfer spatial data to CADD/GIS systems. The course also provides guidance on preparing A-E contracts for surveying, mapping and photogrammetric services, including related cost estimating, contract administration, and quality control/assurance efforts.

**Description.** Specific topics in the course include:

- *Project Planning for Site Plan Mapping:*
  - surveying and mapping standards and specifications
  - project control requirements and considerations
  - field reconnaissance
  - field data collection options;
- *Geodesy and Map Coordinate Systems for CADD/GIS Products:*
  - spatial/geocentric coordinate systems
  - horizontal reference datums (NAD27, NAD83)
  - vertical reference datums (NGVD29, NAVD88, IGLD85, LWRP74)
  - state plane and UTM coordinate systems
  - datum translation/transformation techniques using CORPSCON;
- *Photogrammetric Mapping:*
  - principles of aerial photography and stereographic mapping
  - project planning, specification preparation, and execution
  - cost estimating for government estimate preparation
  - contractor quality control and map testing techniques
  - orthophotography and aerotriangulation concepts
  - conventional and soft copy photogrammetric mapping
  - translation to CADD/GIS data bases
  - demonstration at local photo grammetric mapping firm;
- *Topographic Mapping using Electronic Total Stations and Data Collectors:*
  - field survey procedures for civil/military site plan mapping
  - instrumentation and data collector operation
  - estimating costs and preparing specifications for site plan mapping, and
  - principles and techniques for alternative plane table mapping;
- *Data Processing:*
  - coordinate geometry (COGO) software processing techniques
  - reduction of topographic data to ASCII file format
  - data translation and interface to Intergraph CADD & GIS systems; and



- *Architect-Engineer Contracting for Surveying & Mapping Services:*
- use of guide specifications
- evaluating contractor costs and overhead rates
- contract administration and quality control requirements.

**Prerequisites.** Nominees must be assigned any Occupational Series 0800, 1100, and 1300. This course involves hands-on application of PC-based software-using standard software computational/translation packages such as COGO and CORPSCON. Therefore, nominees must have a general knowledge of PC operation.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2001-1	Huntsville, AL	5/14/2001 5/18/2001

### **SURVEYING IV (GPS)**

**Long Title: Surveying IV (Global Positioning System)**

**203 Length: 36 Hours 35GPS01A**  
**CEUs: 2.9 Tuition: \$1,730.00**

**Purpose.** This course provides training for surveyors, technicians, and engineers in the practical aspects of GPS surveying. The course is designed to provide a technical familiarization with EM 1110-1-1003, "NAVSTAR Global Positioning System Surveying."

**Description.** This course addresses the planning, data acquisition, data processing, and data analysis components of GPS surveying.

Topics covered include:

- *GPS Overview:*
- system concepts
- system components
- surveying techniques
- USACE applications
- *GPS Planning:*
- site reconnaissance
- network planning
- session planning
- satellite visibility diagrams
- *GPS Data Acquisition:*
- real-time differential
- stop and go kinematic survey
- rapid static survey
- *Data Processing:*
- stop and go kinematic survey
- rapid static survey
- *Data Adjustment:*
- compare and contrast off-the-shelf network adjustment indicators
- identify methods utilized to determine observational blunders
- determination of accuracy
- *GPS Contracting:*
- A-E contract specifications
- cost proposals

- questions to ask prospective contractors
- evaluation of contract submittals (vectors, adjustments, visibility diagrams, etc.)
- *Vertical positioning using GPS.*

**Prerequisites.** Nominees should be assigned (a) Occupational Series: selected 0800 and 1300, Surveyors, Engineers, and Technicians; (b) Hands-on computer experience required for this course.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2001-1	Huntsville, AL	6/4/2001 6/8/2001

### **TABS-MD, HYDRODYNAM**

**Long Title: Tabs-MD, Hydraulic Design Modeling System for Open Channel Flow**

**354 Length: 28 Hours 35TOC01A**  
**CEUs: 2.4 Tuition: \$2,240.00**

**Purpose.** This course introduces hydraulic design engineers and selected other professionals to the most recent technological advances in open channel hydraulic analysis techniques developed under the Corps of Engineers Research and Development program and trains them to use the TABS numerical modeling system to solve complex hydraulic engineering problems involving inland waterways, estuaries, wetlands and reservoirs.

**Description.** Day 1. The first day of the course includes an orientation in numerical modeling of hydraulics in rivers, estuaries, and reservoirs and an overview of the TABS system. Finite element mesh design criteria and construction will be taught in an interactive environment using the personal computer (PC) and Surface Water Modeling (SMS) user interface. Day 2. The second day will concentrate on the 2D hydrodynamic model, RMA-2. The interactive "hands-on" PC workshops will illustrate parameter sensitivity for a steady state case. Interpretation and analysis of results will be conducted using the Surface Water Modeling (SMS) interface. Day 3. The PC workshops on the third day will reinforce skills gained during the previous two days and expand the simulation to an unsteady case. Day 4. (Close at noon). Advanced features and planned future updates to the TABS-MD System will be introduced. Additional applications, such as sediment and constituent transport modeling, will be discussed.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: Selected 0800, 1300, and other occupational series with current or planned involvement in hydrodynamic investigations of rivers, estuaries, wetlands or reservoirs; (b) Grade: GS-05 or above.

**Notes.** This 28-hour course replaces the open channel flow modeling (RMA-2) portion of the 2-week course "TABS-2 Open Channel Flow and Sedimentation" (Course No. 070), previously conducted by the Waterways Experiment Station.







HEC-2, or HEC-RAS. Familiarity with the partial differential equations of fluid motion and numerical solution techniques is desirable. Participants should be in positions requiring analysis of complex hydraulic problems.

Session	Location	Date
2001-1	Davis, CA	4/02/2001 4/06/2001

### USACE COMMANDERS' COURSE

*Long Title: USACE Commanders' Course*

120	Length: 100 Hours	15CCC01A
CEUs: 0.0	Tuition: \$2,880.00	

**Purpose.** The USACE Command Preparation Program orients newly assigned district commanders and deputy division/district commanders to some of the unique aspects of command in USACE organizations. The program also provides an understanding and awareness of a broad range of topics related to executing the USACE mission and serving its customers. Consisting of two subcourses, PCC and the Commanders' Course, the USACE Command Preparation Program is intended to establish both the doctrinal framework for district operations, as well as specific tactics, techniques, and procedures for success.

**Description.** District Engineer Pre-Command Course (PCC), "District Command - Essential Facts and Knowledge," is 4 1/2 days long. It provides the district commander designees with the tools, knowledge, and fundamentals to assume command of their district. They will learn key concepts of the Project Management Business Process, Resource Management, and Human Resources issues. In addition to hearing the Chief's command philosophy, they will meet with the Directors of Civil Works and Military Programs. The HQ staff will be introduced, as well. The course starts the first Monday after the last Senior Service College graduation and is mandatory for all District Engineer designees assuming command later in the year.

USACE Commanders' Course, "District Command - Tactics, Techniques, and Procedures" is 8 days long. It is mandatory for all recently assigned District Engineers and recommended for all division and district deputy commanders. It builds upon the introductions in PCC, allowing the students to fully explore the details of command of USACE organizations. Led by serving District Engineers and subject matter experts, the students use lecture and case studies to gain deeper understanding of USACE processes and doctrine. The course concludes with an orientation and tour demonstrating the capabilities of the Topographic Engineering Center. This Phase takes place in October, immediately before the Fall District Commanders' Conference.

**Prerequisites.** Designated and recently assigned district commanders and deputy district/division commanders. Commanders are nominated by the Military Personnel Division of HQUSACE (CEHR-M). Deputy

commanders are nominated by their district/division. Nominations for deputy commanders for Phase II should be sent to the Chief, USACE Professional Development Support Center, ATTN: CEHR-P-TO, P.O. Box 1600, Huntsville, Alabama 35807-4301.

**Notes.** RELATED INFORMATION. No quotas are allocated from the Annual Training Needs Survey for the USACE Commanders Course. All nominees will be selected, unless class size exceeds capacity. Tuition for this course is the responsibility of the gaining command.

Session	Location	Date
2001	Washington, DC	10/16//200 10/25/2000
	Washington, DC	6/00/2001 6/00/2001

### VALUE ENGINEERING

*Long Title: Value Engineering Workshop*

110	Length: 40 Hours	35VEW01A
CEUs: 3.2	Tuition: \$870.00	

**Purpose.** This course provides the participant with the requirements, policies, and procedures necessary to enable the student to perform effectively as a value engineering study team member or leader; to recognize potential areas for VE studies; to identify the value of having an active value engineering program; and to motivate the participant to support continued development.

**Description.** Through lectures, conferences, and workshop sessions, this course provides the history of value engineering and its development in the Corps of Engineers, the need for value engineering in Corps construction, the methodology employed, the value engineering program, and contractor participation in the program. Nominees participate in class exercises and discussions. Approximately half of the course is devoted to workshops in which all participants are involved in actual value engineering studies of construction items selected by the offices involved. This course is designed primarily for training construction and design engineers and technicians in the principles and application of value engineering; however, all levels of management benefit by participating in this course.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: 0340, 0800, 1300, and 1008; (b) Grade: GS-05 or above; (c) as managers with authority and responsibility for decision-making having a cost impact on Corps of Engineers projects. The course is also open to individuals who have a current or projected (within 1 year) assignment requiring knowledge of value engineering methodology. The nominee must not have attended this course in the past 5 years. Nominees must be approved by the local value engineering officer of the nominating division or district.

**Notes.** This course of instruction complies with the certification standards set forth by the Society of Ameri-



can Value Engineers (SAVE) to fulfill the Module I workshop requirement portion for Certified Value Specialist.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2001-1	Huntsville, AL	4/30/2001 5/4/2001

## VISITOR ASSIST MGT & POL

**Long Title: Visitor Assistance Management and Policy**

**324**                      **Length: 20 Hours**                      **35VAU01A**  
**CEUs: 0.0**                      **Tuition: \$580.00**

**Purpose.** This course provides an overview of the Corps of Engineers Visitor Assistance Program to promote consistency in Visitor Assistance policy application and explore alternative management techniques and practical applications.

**Description.** Topics covered in this course include the policy status and direction of the Visitor Assistance Program, Title 18, Title 36, communications, and legal liabilities.

**Prerequisites.** Employees who have attended the Visitor Assistance Update course within the past 5 years should not schedule this course. Attendees should be managers and supervisors at project, district, or division level who plan and manage the Visitor Assistance Program. Park Rangers, GS-9, may also attend, but they will be given a lower priority. Nominees must be approved by the Natural Resources Functional Manager at the division level. Corps Security Specialists (GS-0080), Corps military personnel serving in a security capacity and Operational Project Managers may attend the course to gain a better understanding of the Corps Visitor Assistance Program.

**Notes.** The basic Visitor Assistance NRM course is not a prerequisite of this course. Employees responsible for but not directly in charge of the Visitor Assistance Program (i.e., operations project managers and section branch and division chiefs) are eligible. This course does not satisfy the requirement for authorization of citation authority.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2001-1	Huntsville, AL	11/15/2000 11/17/2000
2001-2	Huntsville, AL	8/1/2001 8/3/2001

## VISITOR ASSIST NRM

**Long Title: Visitor Assistance Program for Natural Resources Management**

**147**                      **Length: 36 Hours**                      **35VAN01A**  
**CEUs: 3.2**                      **Tuition: \$860.00**

**Purpose.** This course, in combination with other required training, satisfies the minimum requirements for Authorization of Citation Authority. This course is designed to develop an understanding of the formulation, purpose, and limitations of the Corps of Engineers

Visitor Assistance Program and to prepare trainees to handle the special responsibilities required in performing their official duties. This training is supplemented by detailed Division/District instruction of citation authority implementation procedures. In order to obtain citation authority, the graduate must complete the required Basic Visitor Assistance Training Curriculum (EC 1130-2-213 - Policy revision to ER 1130-2-550. Chapter 6), have principle duties in recreation and NRM and be certified by the District Commander as per ER 1130-2-550, Chapter 6.

**Description.** Topics covered in this course include: organization policy and mission, Title 36 and program development, Title 18, authority and jurisdiction, magistrate court, torts claims, ranger responsibilities and image, legal constraints, enforcement procedures, situational analysis, tactical communication, and personal protection techniques.

**Prerequisites.** Employees who have previously received this training shall be nominated for the Visitor Assistance Management and Policy course. Nominees must be assigned (a) Occupational Series: 0025, 0023, or special series such as biologist, forester etc.; (b) Grade: GS-04 or above, seasonal and temporary employees included. Nominees must be currently serving or have an anticipated assignment as a Corps park manager or ranger or be in a directly related job such as a forester, a wildlife and fisheries manager, or a biologist. Trainees should have less than 4 years experience in the Visitor Assistance Program, as per ER 1130-2-550. Nominees must be approved by the Natural Resources Functional Manager at the Division level.

<u>Session</u>	<u>Location</u>	<u>Date</u>	
2001-1	Huntsville, AL	11/13/2000	11/17/2000
2001-2	Huntsville, AL	2/5/2001	2/9/2001
2001-3	Huntsville, AL	7/30/2001	8/3/2001

## VISUAL INFO RES & TECH

**Long Title:** *Visual Information Resources and Technology*

**388**                      **Length: 28 Hours**                      **52VIP01A**  
**CEUs: 0.0**                      **Tuition: \$1,170.00**

**Purpose.** This course provides practitioners in the Visual Information (VI), public affairs, interpretive services disciplines, and others with similar interests and responsibilities, with instruction in current VI technologies, procedures, and methods. The course benefits those who are responsible for planning, designing, and producing VI products, including electronic imaging, web pages, fliers, newsletters, pamphlets, brochures, multimedia AV productions, etc. Information managers and VI managers will benefit by gaining additional insight into the concerns, needs, and activities of VI practitioners.

**Description.** This is a basic course which includes lectures, demonstrations, and hands-on exercises on



the following topics: (a) electronic imaging; (b) new technology review; (c) web page design; (d) graphic standards; (e) electronic presentations; (f) electronic publishing (g) portable document format (PDF).

**Prerequisites.** Nominees should be assigned (a) Occupational Series: 0023, 0025, 0026, 1001, 1010, 1020, 1035, 1060, 1071, 1082, 1084, and others having a functional requirement to develop their knowledge of the VI discipline; (b) Grade: GS-05 and above.

Session	Location	Date
2001-1	Huntsville, AL	4/2/2001 4/5/2001

## WATER & WATERSHED

**Long Title: Water and the Watershed**

164	Length: 36 Hours	33WAW01
CEUs: 0.0		Tuition: \$1,780.00

**Purpose.** The primary objective of the course is to provide participants with an understanding of the physical nature of the water of the watershed, the role of water in shaping life of the watershed, and the conceptual, technical and institutional tools available for planning and management of its water resources.

**Description.** The course covers the occurrence, movement, storage, and control of water (surface and ground water hydrology); the natural development of the landscape (geomorphology); the concept of the watershed as a bioregion and ecosystem; the role of the soil mantle as a living filter and the effects of wastewater on stream and river water quality; the development of the water resources for multiple-purposes; the restoration of natural features in wetlands and Corps' restoration projects; and the social, cultural and institutional elements of watershed management. Understanding the physical nature of water and its many roles in the watershed is prerequisite to effective planning and management. Conceptual tools to be discussed include adaptive management, and collaborative management with other stakeholders to resolve water conflicts. Technical tools include: accessing data and information via the Internet; methods and models available to simulate hydrologic and ecologic features; water budget analysis; Geographic Information Systems (GIS); and current communications technology for study management such as Web sites, e-news, e-conferencing, e-calendars. The course will discuss the many new and active local organizations with a stake in the water of the watershed and the role of the Corps in watershed initiatives and partnerships.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: Selected 800 and 400 series, 028, 819, 184, 101, 401, and 1301, (b) Grade GS-09 and above. Nominees should be water control managers, hydrologists, hydraulic engineers, environmentalists, biologists, economists, sociologists, ecologists, or study managers.

Session	Location	Date
2001-1	Davis, CA	5/7/2001 5/11/2001

## WATER QUALITY MGT

**Long Title: Water Quality Management**

177	Length: 36 Hours	33WQM01
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**Purpose.** This course provides a basic overview of federal statutes, Corps of Engineers guidance, and technology applicable to water quality and environmental management of water resource projects.

**Description.** Students will receive an overview of reservoir-watershed relationships; reservoir and tailwater characteristics and processes; aquatic ecology; water quality assessment techniques; and data interpretation. Participants are introduced to mathematical models and other techniques and technology useful in water quality assessment and management.

Students will participate in case studies on the application of assessment and management techniques. Water quality problem anticipation, identification, and solution/improvement are included. A discussion of current issues and topics relevant to water quality management and water control is included. These discussions may include: potential conflicts between nonfederal hydropower development and water quality considerations, emergencies (floods and droughts) and water quality considerations, contaminants, nonpoint source management and risk assessment.

**Prerequisites.** This course is intended for engineers, hydrologists, biologists, and others who are involved in water control, water quality, and other hydrologic investigations. Nominees should be assigned (a) Occupational Series: Selected 0400, 0800 and 1300; (b) Grade: GS-07 or above.

## WATERSHED WORK

**Long Title: Interagency - Working at a Watershed Level**

261	Length: 36 Hours	33WSW01A
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**Purpose.** The objective of this course is to introduce the use of the watershed approach to understanding issues, problems and opportunities related to water and related land resources. The course is designed to increase awareness and understanding of three concepts critical to working at a watershed level; i.e., the need to adapt the process of problem solving to allow for connectedness, choices and change.

**Description.** Upon completion of this training, participants will be able to describe the benefits and challenges of applying the scientific, social and organizational principles of the evolving watershed approach; identify the interrelationships among basic biotic and abiotic components and processes of a watershed and how they vary in time and space; describe effects



of several types of human activities and natural events on watershed components and processes; explain the role of watershed analysis and planning in support of comprehensive problem-solving; list a variety of actions that can be applied singularly or in combination; and incorporate social and organizational elements into the watershed approach. Course topics include: Benefits of using a watershed approach; watershed ecology; agents of change; analysis and planning; management measures; and social and organizational elements of watershed planning and management

**Prerequisites.** This course has been developed in anticipation of the target audience being primarily federal and non-federal partners actively involved in watershed planning and management activities under the auspices of the Corps (see NOTE). No prerequisites are necessary for this basic course, but some environmental sciences course work or experience may significantly aide trainees. Typically, trainees will have significant experience or training in some of the topics covered and little or none in others.

**Notes.** This course is an adaptation of the interagency course, with the same name, listed under EPA's Watershed Academy. Although a number of the Corps watershed studies or activities are comprehensive in scope, Corps watershed studies frequently have a single or multiple focus involving the restoration of aquatic habitat or damaged environments, flood damage reduction and hazard mitigation, navigation, water allocation, federal land stewardship and/or regulated activities within the context of the watershed. The Corps activities are also typically at a larger scale than most community-based watershed efforts. Those individuals focused on water quality issues or working with/interested in small scale, community-based watershed initiatives may find a session listed under EPA's Watershed Academy to be better suited to their particular needs.

## WELDING DESIGN

*Long Title: Welding Design*

**162**                      **Length: 36 Hours**                      **35WLD01A**  
**CEUs: 0.0**    **Tuition: \$1,420.00**

**Purpose.** The course teaches the participant, with a limited knowledge of welding or no background in welding, to create and draft replacement designs, to redesign or reinforce welding designs, and to communicate this information to field personnel.

**Description.** The course covers design considerations and proper communication of welding processes, joint designs, weldability of metals, design methods, weld size determinations, weld costs estimating, design formulas, failure analysis of past design problems, and economics of welding.

**Prerequisites.** Nominees must be assigned and/or meet all of the following: (a) Occupational Series:

Selected 0800 and 1600; (b) Grade: GS-07 or above; (c) have current or projected assignments requiring welding design and inspection responsibilities.

**Notes.** This course contains requirements which are mandatory for course completion and may require overtime. It is estimated that 6 hours of overtime may be required. It is your responsibility to bring this to the attention of your supervisor so that an overtime request/determination can be made by your appropriate personnel. It is also your responsibility to certify the amount of time expended on these requirements to your supervisor when you request overtime compensation.

Session	Location	Date
2001-1	Troy, OH	4/30/2001 5/4/2001

## WELDING—QV

*Long Title: Quality Verification: Welding*

**116**                      **Length: 36 Hours**                      **35WLQ01A**  
**CEUs: 2.9**    **Tuition: \$1,140.00**

**Purpose.** This course teaches the participant to interpret the various methods and techniques employed in weldments and assuring the quality of welds.

**Description.** Through lectures, conferences, and practical exercise sessions, this course covers the subjects of welding safety and precautions, welding symbols, processes and quality assurance problems, roof decking welding, codes, procedures, and operator qualification, filler metals, workmanship, visual inspection, dye penetrant, magnetic particles, radiographic and ultrasonic testing techniques and interpretation, and destructive testing. Quality assurance in welding is emphasized.

**Prerequisites.** Nominees must be assigned and/or have all of the following: (a) Occupational Series: 0801, 0802, 0809, 0810, and selected 0800; (b) Grade: GS-05 through GS-11; (c) other: Students should have current or projected assignments with welding quality assurance responsibilities. They must have previously completed the Quality Verification: General Construction course and must not have attended this or a similar course within the past 5 years. (d) An exportable training course "Quality Verification: Basic Welding" is available and would be helpful for students to complete prior to attending this course. It is strongly recommended for those who have minimal welding experience.

**Notes.** This course contains requirements which are mandatory for course completion and may require an estimated 6 hours of overtime. It is your responsibility to bring this to the attention of your supervisor so that an overtime request can be made by your appropriate personnel. It is also your responsibility to certify the amount of time expended on these requirements to your supervisor when you request overtime compensation.



<u>Session</u>	<u>Location</u>	<u>Date</u>
2001-1	Troy, OH	1/29/2001 2/2/2001
2001-2	Troy, OH	2/26/2001 3/2/2001

### WET MIT BANK DEV/MGT

**Long Title:** *Wetland Mitigation Bank Development and Management*

**239**                      **Length: 36 Hours**                      **33WMB01**  
**CEUs: 0.0**    **Tuition: \$1,920.00**

**Purpose.** Mitigation banking is gaining acceptance as a tool for dealing with some wetland losses. With the recent interagency policy on mitigation banking and the increased use of banking, it is imperative that Corps of Engineers personnel be able to apply mitigation banking principles to the plan, design, implementation, and management of mitigation banks.

**Description.** This course is offered cooperatively between the USACE Waterways Experiment Station and the Institute for Water Resources to bring together their expertise in mitigation banking issues. Based on the technical experience from WES in ecosystem restoration, management, and functional evaluation and the national mitigation bank study conducted by IWR, the course will provide students with the wide base of knowledge required to develop and manage successful mitigation banks. The course will address such subjects as setting bank goals, Federal agency perspectives on banking, financial assurances, calculation and management of credits and debits, use of the Hydrogeomorphic (HGM) Wetland Functional Assessment Method, considerations for siting and planning, and success criteria. These subjects will be illustrated with case studies of mitigation banks from around the country and interactions with people directly involved with mitigation banks. Field exercises will allow practice of some aspects of classroom instruction. The course is designed primarily with the regulator in mind; however, personnel from other Corps mission areas may benefit from the course material.

**Prerequisites.** Nominees must be assigned: (a) Occupational series: All occupational series are accepted. Priority will be given to regulatory personnel. Experience in mitigation is strongly recommended; and (b) Grade: GS-09 and above.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2001-1	Orlando, FL	6/25/2001 6/29/2001

**NEW**

### WETLAND RIVER FUNC/ECOL

**Long Title:** *Wetland Riverine Functional Assessment and Ecology for Project Managers Workshop*

**426**                      **Length: 32 Hours**                      **33WRF01A**  
**CEUs: 0.0**    **Tuition: \$1,760.00**

**Purpose.** In the development of CE Water Resources Development Act (WRDA) projects and other important

CE activities, NEPA driven mitigation measures required increasingly rigid, complex and watershed level functional assessments of adverse unavoidable project impacts. Historically, structural (acre for acre) mitigation has been a surrogate for functional (maintain wildlife, habitat, blood flow alteration, water quality, etc) mitigation. This approach is no longer adequate due to the rapid development of the science/ecology and also functional assessment methods based upon the geomorphology, hydrology (science of water and its properties) and landscape vegetation from a watershed perspective. The hydrogeomorphic functional assessment method (HGM) is a Federal Interagency developed tool to address this critical field need. Focus of this workshop is on small and large riverine systems in eastern and western USA and also on providing project managers with an introduction to the new river ecology knowledge which is essential in meeting restoration and enhancement mitigation objectives. A special section of the workshop will cover restoration alternatives identification and assessment of deeply incised channels and floodplains of selected rivers. Participants will meet and work in facilitated problem solving classroom and field sessions with the experts in this field.

**Description.** Topics include: (1) Introduction to wetland river ecology of the late 1990's, (2) HGM classification system, (3) HGM national and regional guidebooks, (4) Geomorphology of Mississippi River System, (5) River Ecology and HGM Assessment of Rivers in KY, TN, and MT, (6) Case studies restoration, (7) Lesson learned, (8) Mitigation Alternatives Identification/Assessment and, (9) HGM and future WRDAs and other CE authorities and (10) Calculating Habitat Units.

**Prerequisites.** Nominees may be assigned from engineering, planning, natural resource management, regulatory, etc. to include program/project management functions within the Corps of Engineers. Occupational Series: Open to all including legal, real estate, navigation, etc. This workshop is designed to provide background introductory information.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2001-1	Kallispell, MT	10/9/2000 10/13/2000

### WETLANDS DEV & REST

**Long Title:** *Wetlands Development and Restoration*

**276**                      **Length: 36 Hours**                      **33WDR01A**  
**CEUs: 0.0**    **Tuition: \$2,100.00**

**Purpose.** This course provides training in the concepts and practices of ecosystem restoration and development in both inland (fresh water) and coastal areas. The course is directed toward Corps of Engineers biologists, engineers, and natural resources managers concerned with ecosystem restoration including development and restoration of aquatic, wetland and riparian (stream/river) habitats. Practical, hands-on field experience and application of state-of-the-art techniques are emphasized and conducted by the leading



national experts in the field of environmental restoration. The basic hydrologic principles in planning for and the development of environmental restoration projects is provided to meet the requirements of the Corps of Engineers and the public. Course focuses on lessons learned over the past twenty years with detailed analysis of hydrology, biology, and soils associated with both successful and failed restoration projects.

**Description.** National training is conducted at three (3) regional wetland sites representing major wetland ecosystems: East Coast, West Coast, and at a Gulf of Mexico major estuary site. Technical sessions focus on marine, estuarine, and freshwater wetlands development and restoration of the particular coastal area involved (East Coast and West Coast). The Gulf of Mexico site focuses on wetland ecosystem restoration and development nationwide but emphasizes sites in Texas, Louisiana, Mississippi, Alabama, and Florida. All sessions include methods and case study training in site selection, determining water management (hydrology) and site design specifications, plant selection and revegetation techniques, operation and maintenance requirements, procedures for measuring and evaluating success of aquatic, riparian, wetlands, seagrass development and restoration and key factors to consider to determine the cost, manpower, expertise, equipment and materials required to successfully develop and restore these habitats. Selected case studies focused on lessons learned and extensive field exercises are included. Training is also provided for the following topics, as applicable, based on the location of the particular sessions: (1) hydrologic considerations for ecosystem restoration, (2) techniques for developing new and restored coastal and interior wetlands and seagrass beds, as applicable, using selected case studies, (3) techniques and examples for using wetland vegetation as an alternative to structural techniques for shoreline and levee erosion control, (4) identification of sources and methods for obtaining suitable plant stock including key factors that affect development and restoration costs and success rates; and (5) mitigation techniques for evaluation, predicting and reducing impacts of engineering activities in wetlands and seagrass areas, (6) guidance on key factors that should be considered when preparing work orders and contracts for restoration activities.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: 0025, 0028, 0150, 0400, 0800, and 1300. Highly recommended for planning, regulatory, environmental resources, policy, engineering and natural resources management personnel and those involved with the planning and implementation of ecosystem restoration projects, regulating and evaluating restored wetlands and seagrass; (b) GS-07 and above is suggested.

**Notes.** SPECIAL INSTRUCTIONS: Wetland classes are scheduled during mild periods of the year; however weather conditions can and do change dramatically at the field sites and students should expect to get wet and have extensive hands-on field exercises. Student nomi-

nations should be submitted for the location most closely related to your own training areas but should not preclude the opportunity to view and experience advanced geographical specific ecosystem wetland restoration and development projects at other Corps project sites.

<u>Session</u>	<u>Location</u>	<u>Date</u>	
2001-1	Apalachicola, FL	3/26/2001	3/30/2001
2001-2	Olympia, WA	8/20/2001	8/24/2001
2001-3	Apalachicola, FL	1/29/2001	2/2/20001

## WETLANDS EVAL

**Long Title: Wetlands Evaluation Procedures**

**273**                      **Length: 36 Hours**                      **33WEP01A**  
**CEUs: 2.2**                      **Tuition: \$2,180.00**

**Purpose.** In planning civil works projects, wetlands, restoration or mitigation measures now require increasingly rigid and complex evaluation of the benefits expected from the wetlands restored or replaced. Restoration of wetlands on existing Corps project lands under Section 1135 or 206 also require increasingly sophisticated evaluation techniques for their justification. This course provides an in-depth introduction and overview of existing wetland evaluation procedures and case study application to wetland systems for environmental impact assessment and evaluation purposes. Methods to identify and evaluate the functions of wetlands and their corresponding values to the ecosystem and society will be discussed. Evaluation of wetlands' role in an ecosystem and watershed setting will be addressed. The requirements for wetlands evaluation and justification during project planning, operations, and the natural resources management phases of the civil works program will be stressed.

**Description.** Topics include (a) introduction and overview of wetlands evaluation procedures and techniques currently in use and being developed; in-depth discussion of those selected techniques particularly applicable for Corps project planning and operations purposes; (b) discussion of the field operational applicability and constraints of selected wetlands evaluation techniques; (c) review of case studies and lessons learned; (d) laboratory, demonstration, and field experience with selected evaluation methods and specific wetland functions; and (e) open discussion and problem-solving.

**Prerequisites.** Nominees must be assigned (a) primarily as planning division and natural resources management personnel operations and regulatory functions personnel will also benefit; (b) Occupational Series: planning division personnel (biologists, engineers, economists, and other professionals in the planning function) as well as operations staff (natural resources management, dredging), environmental specialists, and regulatory staff; (c) Grade: GS-09 or above; and (d) successful completion of "Fundamental of Wetlands" (PROSPECT course No. 272), or equivalent field experience or course work.



<u>Session</u>	<u>Location</u>	<u>Date</u>
2001-1	Mobile, AL	3/26/2001 3/30/2001

## WORKING DIVER

**Long Title:** *Working Diver and Supervision*

<b>035</b>	<b>Length: 160 Hours</b>	<b>58DVS01A</b>
<b>CEUs: 0.0</b>		<b>Tuition: \$3,240.00</b>

**Purpose.** This course provides Corps of Engineers employees who are assigned as divers, diver supervisors, and/or agency diving coordinators with the necessary skills, knowledges, and abilities to safely perform their assigned underwater tasks. This training will provide students with state-of-art technology and methodology to safely perform underwater diving operations and effectively manage diving contingencies.

**Description.** Students will become familiar with and perform underwater exercises with state-of-art diving systems including self contained underwater breathing apparatus (SCUBA) and Surface Supplied Air equipment. This course consists of classroom presentations, training pool exercises, open water activities, and practical operations. Sessions pertinent to underwater diving operations will include, but are not limited to, the following topics and activities: (a) diving physics; (b) diving physiology; (c) diving medicine; (d) modern diving systems and support equipment; (e) SCUBA equipment and operations; (f) surface supplied air equipment and operations; (g) decompression principles & associated tables; (h) modern diving accident management techniques; (i) working dive planning; (j) diver supervision principles and practices (k) preparation and use of Activity Hazard Analyses; (l) USACE, OSHA, and US Navy diving regulations (ER 385-1-86, EM 385-1-1, 29 CFR 1910, and US Navy Diving Manual); and (m) management of the diving function.

**Prerequisites.** (a) Students for this course must have a current or projected assignment to a position requiring underwater diving skills and prior to attending this training must hold a SCUBA training certificate or equivalent from a nationally recognized diver training organization, e.g., PADI, NAUI, etc. Failure to provide evidence of diver certification will be cause for rejection; (b) Nominees must successfully complete a diving medical examination as detailed in ER 385-1-86 within the past 11 months and provide a copy of the completed medical form to the training agent on the first day of class; and (c) Students must participate in all lectures, written and practical exercises, and score at least 70 percent on the comprehensive post-course examination to receive diver certification. Exceptions or deviations to any of these prerequisites shall be approved by the HQUSACE Safety and Occupational Health Office.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2001-1	TBD	9/4/2001 9/28/2001



## **DISTANCE LEARNING TRAINING PROGRAM**

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## GENERAL INFORMATION DISTANCE LEARNING TRAINING

The Corps of Engineers Distance Learning Training Program at the Professional Development Support Center was established on 15 March 1981, with the mission of developing and maintaining video training courses for the Corps of Engineers. The concept of distance learning training was recognized as a means of providing cost-effective training programs which could be used at division and district offices, as well as at Corps laboratories and resident/area offices. This mission has expanded to the development of CD-Rom-based courses, video teleconferencing, and web-based (Internet) training courses, along with the original video-based courses. These distance learning courses can be used for as many trainees and training sessions as scheduling permits. Training can be conducted at multiple locations on a flexible schedule to meet local and individual needs without travel and per diem expenses. The cost effectiveness of distance learning training is the accessibility of training to a broader-based audience and a larger number of trainees with minimal travel expenses.

**Exportable courses** are a series of job-related exportable training courses that provide a set of training materials that can be used at local offices. Exportable courses are visual-based, task active, and facilitator-led. The course components are integrated and dependent upon each other to train successfully. A typical exportable course is composed of a Visual Content Carrier (video tape or CD-ROM), a Facilitator's Guide, and a Student Study Guide. The local facilitator coordinates these materials and serves as the training motivator and moderator.

**Video Teleconferencing** provides access to broader educational and training opportunities and specialized expert assistance. The best Corps trainers present stimulating lectures on technical, professional, and organizational development in real time via audio and video transmissions.

**Web-based Training (WBT)** is an innovative approach to distance learning in which computer-based training is provided through the World Wide Web, the Internet, and intranets. Web-based training presents live content, as fresh as the moment and modified at will, in a structure allowing self-directed, self-paced instruction in any topic. WBT is media-rich training fully capable of evaluation, adaptation, and remediation, all independent of computer platform.

## BASIC FIN MGT

*Long Title: Basic Financial Management*

802/CERM-BA

**Training Length: 8 Hours**

**Web-Based: Self-Paced**

**Purpose.** This course provides an overview of the various regulatory, policy, and statutes that govern the day-to-day financial management decisions.

**Description.** Modules of instruction include authorization and appropriations; statutory constraints on use of funds; funds management, and legislative initiatives in financial management and the CFO Act.

**Prerequisites.** Students should be general workers, supervisors, and management personnel who are directly involved with the day-to-day financial management responsibilities.

## BASIC SPILL RESPONSE

*Long Title: Basic Spill Response At Civil Works Facilities*

772/CECW-OA

**Training Length: Awareness Level: 2 Hours**

**Operations Level: 8 Hours**

**Video Run Time: 1.2 Hours**

**Purpose.** This course provides training for all personnel who may be in a position to respond to spills and/or leaks of hazardous substances. It is intended to provide first responders at the awareness and operations levels with the skills and knowledge needed to protect their safety and health when confronted with a release of a hazardous substance. Requirement for this training is established in the Code of Federal Regulations (CFR); specifically 29 CFR 1910-120, paragraph q.

**Description.** The exportable training is visually-based, student-active, and self-contained. The course package consists of a Facilitator's Guide, Student Study Guide, and video content carrier. It presents the instructional materials in short increments via videocassette and the student study guide. Modules and submodules are short to enhance learning.

**Modules/Submodules.** (1) First Responder Awareness Level: (a) Recognizing a Release and (b) Initiating a Response; (2) First Responder Operations Level: (a) Recognizing Hazards for a Release, (b) Protecting Self, and (c) Protecting Nearby Persons, Property, and Environment.



### **BASIC WELDING: QV**

**Long Title: Quality Verification: Basic Welding**

**743/CEMP-CE**

**35QVW01A**

**Training Length: 24 Hours;**

**Video Run Time: 1.8 Hours**

**Purpose.** This training provides participants with the basic knowledge to interpret the various methods and techniques employed in weldments and to assure the quality of welds.

**Description.** The training materials include one ½" videotape cassette, a Facilitator's Guide (FG), and a Student Study Guide (SSG). The SSG includes the videotape narration, task-active exercises and answers (pretest and posttest), sample forms, and a glossary.

**Modules.** The seven modules of instruction presented in the course are (a) Welding Quality Assurance Requirements and Duties; (b) Welding Specifications and Codes; (c) Basic Welding; (d) Symbols, Welding, and Nondestructive (NDT) Testing; (e) Welding Procedure Specifications, Qualifications, and Welding Performance Qualifications; (f) Weld Testing and Defects; and (g) Welding Safety.

**Prerequisites.** Nominees should be assigned (a) Occupational Series: 0802, 0809, and selected 0800; (b) Grade: GS-05 through GS-11. Students should have current or projected assignments having welding quality assurance responsibilities. Nominees should have completed the Construction Quality Management (classroom or exportable) course.

### **BUD PRIN OP BUD**

**Long Title: Budget Principles For Operating Budget Preparation And Analysis**

**753/CERM-B**

**42BPB01A**

**Training Length: \*\***

**Floppy Disk: Self-paced**

**Purpose.** This course provides budget unit personnel with the technical expertise to create, develop, and formulate an organizational object class budget; to use budget and accounting systems to prepare accurate operating budgets; to define potential budget problems; to use spreadsheet software to analyze trends and operations; and to develop value analysis ability.

**Description.** This course is computer-based. Training materials include one computer floppy disk, a Trainer's Guide, and a Student Workbook. Topics include (a) Operating Budget Fundamentals; (b) Information Systems; (c) Budget Analysis; and (d) Defense of Budgets.

**Prerequisites.** Students should be budget unit personnel with a basic understanding of operational requirements. Students should also prepare organizational

budgets for organization chiefs, facility account managers, technical indirect account managers, and office managers. They should be familiar with the existing Corps financial information system and be knowledgeable of PC-based spreadsheet software.

**\*\* Self Paced - 6 Hours  
Facilitator - 16 Hours**

### **BUSINESS GRAPHICS**

**Long Title: Effective Use Of Business Graphics**

**758/CEIM-IV**

**51BUG01A**

**Training Length: 4 Hours;**

**Video Run Time: 58 Minutes**

**Purpose .** This course provides employees with skills to improve visual information products.

**Description.** Modules of instruction include (a) Organizing Information to be Presented, (b) Identifying the Most Effective Mix of Visual Products, (c) Identifying Resource Requirements, (d) Identifying Effective Presentation Graphics Techniques, (e) Identifying Effective Desktop Publishing Techniques, and (f) Identifying Visual Standards Requirements.

**Prerequisites.** Nominees should be those persons who use or produce graphics and publications.

### **COMPUTER SECURITY**

**Long Title: Computer Security**

**761/CEPM-ZA**

**55CSC01A**

**Training Length: 6 Hours;**

**Video Run Time: 1.1 Hours**

**Purpose.** This course is a brief overview of computer security as it applies to day-to-day operations. It is intended for everyone who is involved in maintaining security of Automated Information Systems (AIS). The course is divided into two major segments: Modules 1-3 are for all users of computer systems and Module 4 is for AIS managers.

**Description.** The topics covered in this course include (a) data sensitivity; (b) protection of systems, data, passwords, and information; (c) recognition of computer tampering and misuse; (d) authorized and unauthorized activities; (e) computer authorization documents; and (f) management of computer security activities and documentation.

**Prerequisites.** Nominee should be any person who uses or manages computers.



### CONCRETE: QV

**Long Title: Quality Verification: Concrete  
(Revised)**

**731/CECW-EG-C** **35ECV01A**  
**Training Length: 40 Hours;**  
**Video Run Time: 4.3 Hours**

**Purpose.** This course provides the graduate with the technical knowledge, both theoretical and practical, to verify concrete construction with a degree of competency that best protects the interest of the government.

**Description.** The training materials include 1/2" videotape cassettes, a Facilitator's Guide, a Student Study Guide (SSG), and the American Concrete Institute Manual of Concrete Inspection. The SSG will include the videotape narration, task-active exercises and answers (pretest and posttest), reference materials, sample forms, an index, a glossary, and an acronym list.

**Modules.** The 12 modules of instruction and 1 optional module presented in the course are (a) Quality Assurance Requirements; (b) Fundamentals of Concrete and Concrete Materials; (c) Preparation for Concrete Production; (d) Sampling and Testing Concrete; (e) Preparation for Placing Concrete at the Site; (f) Transporting Concrete; (g) Placing and Consolidating Concrete; (h) Finishing Concrete; (i) Curing Concrete; (j) Form Removal; (k) Joints; (l) Hot-Weather and Cold-Weather Concreting; and Optional Module: Special Concretes.

**Prerequisites.** Nominees must (a) Be high school graduates and (1) have duties, present or projected, as an inspector of concrete construction in the field and (2) have need, in some other capacity, of an in-depth knowledge of concrete construction inspection; and (b) not have attended the traditional Quality Verification: Concrete I at the Waterways Experiment Station within the past 5 years. Students should have completed the Construction Quality Management (classroom or exportable) course.

### CONST QUALITY MGT

**Long Title: Construction Quality Management  
(Revised)**

**734/CEMP-CE** **35CQM01A**  
**Training Length: 24 Hours;**  
**Video Run Time: 1.75 Hours**

**Purpose.** This course familiarizes Corps of Engineers quality management personnel and others with construction quality management policies, requirements, and procedures.

**Description.** This instructional program is based on approximately 2 hours of videotape instruction broken into 19 submodules of from 5 to 15 minutes each. The

instructional program is designed to take 3 full days (24 hours) of instructional time.

**Modules.** The eight modules of instruction presented in the course are (1) Introduction to Construction Quality Management (5 submodules); (2) BCO Review (2 submodules); (3) The Quality Assurance Plan (2 submodules); (4) The Quality Control Plan (2 submodules); (5) Preconstruction Conference and Coordination Meeting (not divided into submodules); (6) Submittals (not divided into submodules); (7) Government Quality Assurance (5 submodules); and (8) Making the System Work (not divided into submodules).

**Prerequisites.** Nominees should be assigned (a) Occupational Series: Selected 0800; (b) Grade: GS-07 or above; (c) Other: Current or projected assignment as a member of the resident or area engineer's staff whose day-to-day function entails construction contract surveillance and contract administration. Specification writers and designers who establish the quality to be incorporated in the contract documents are eligible for attendance. Further, construction contractor personnel, including those who are assigned to quality control activities, are encouraged to attend. In order to insure spaces, the district engineer should canvass contractors within his area, invite them to attend, and reserve an appropriate number of spaces.

### CONST SAFETY: QV

**Long title: Quality Verification: Construction  
Safety**

**739/CESO-O** **35ECS01A**  
**Training Length: 16 Hours;**  
**Video Run Time: 1.8 Hours**

**Purpose.** This training provides participants with a basic knowledge of the fundamentals of Construction Safety.

**Description.** The training is formatted in the following five modules of instruction: (a) introduction to quality verification construction safety; (b) excavation and trenching; (c) scaffolding and means of access; (d) inspecting temporary electrical services; and (e) heavy construction equipment.

This exportable training course consists of a Facilitator's Guide, Student Study Guide, EM 385-1-1, and video-cassettes. The training takes approximately 2 days to complete; however, it can be administered in shorter increments to accommodate local needs.

**Prerequisites.** Nominees should be assigned (a) Occupational Series: Selected 0800; (b) Grade: GS-07 or above. Students should have a current or projected assignment as a member of the resident or area engineer's staff whose day-to-day functions entail construction safety inspection. Students should have completed the Construction Quality Management (classroom or exportable) course.



## CONTRACTING OVERVIEW

**Long Title:** *Contracting Overview (Revised)*

**742/CEPR-ZA** **41CNO01A**

**Training Length: 24 Hours;**  
**Video Run Time: 3.3 Hours**

**Purpose.** This course is intended to educate with focus on concepts rather than execution. It provides the student with a basic understanding of the contracting system emphasizing what is involved and why things are done, not how they are done. This is the first course in the core curriculum of courses for Construction Contract Administration/Acquisition Training. It is a prerequisite for taking courses in the core curriculum of the PROSPECT Construction Contract Administration Training Program.

**Description.** The training materials include two 1/2" videocassettes, a Facilitator's Guide, and a Student Study Guide. The course is a basic contracting course. Topics include Basic Federal Acquisition Regulation (FAR) System, Basic Responsibilities and Authorities, Acquisition Planning and Competition, Contracting Process, Socioeconomic Programs, Funding Issues, Contract Administration, Special Categories of Contracting, Forms, and Ethics/Standards of Conduct.

**Modules/Submodules.** (1) Introduction to Contracting Overview (no submodules); (2) Defense Acquisition Workforce Improvement Act (DAWIA) (no submodules); (3) Legal Procedural Framework (no submodules); (4) The Corps Contracting Team (no submodules); (5) Acquisition Planning and Competition (6 submodules); (6) The Contracting Process (3 submodules); (7) Kinds of Contracts (5 submodules); (8) Socioeconomic Programs (2 submodules); (9) Contract Administration/Management (8 submodules); and (10) Ethics/Standards of Conduct/Fraud, Waste and Abuse (no submodules).

**Prerequisites.** None. Students should be assigned to or expected to be assigned to a job involved with the procurement or contract administration process. This course is for all military and civilian job series involved in the acquisition process to include contracting, contract administration, project management, planning, resource management, and operations.

## CQC-BRIDGE TO SUCCE

**Long Title:** *Contractor Quality Control - A Bridge To Success*

**745/CEMP-CE** **54CQC01A**

**Run Time: 14 Minutes**

**Purpose And Description.** This training film presents a uniform set of facts about the typical construction contract CQC system in the form of an overview geared toward the contractor. It may be used during preconstruction or coordination meetings and ad-

resses what is expected of the contractor during construction. It is accompanied by EP 715-1-2. No student study guide or facilitator guide accompanies this program.

**Prerequisites.** Each quality assurance personnel or supervisor assigned to a Corps construction contract should view the program. Attendees should have a knowledge of construction practices for each discipline under their purview and a general knowledge of the building codes or standards for those disciplines.

## CQM CD-ROM

**Long Title:** *Construction Quality Management - CD-ROM*

**795/CEMP-CE**

**Training Length: 24 Hours**  
**CD-ROM Time: Self-Paced**

**Purpose.** This course familiarizes Corps of Engineers quality management personnel and others with construction quality management policies, requirements, and procedures.

**Description.** This course is a CD-ROM version of Construction Quality Management. The instructional program is designed to be taken self-paced. The course can be taken for review in small groups with a facilitator. However, for credit the course must be completed self-paced by each student. As a minimum, in order to view this course the following hardware/software will be required: 486DX4-100MHZ computer with 16MB Ram, 2MB Video Ram, 16-bit sound card, 1.2GB Hard Disk Drive, 6X Speed CD-ROM Drive, and Internet connection with web browser capabilities. Program will operate on either Windows 3.1 or Windows 95 operating system.

**Prerequisites.** Nominees should be assigned (a) Occupational Series: Selected 0800; (b) Grade: GS-07 or above; (c) Other: Current or projected assignment as a member of the resident or area engineer's staff whose day -today function entails construction contract surveillance and contract administration. Specification writers and designers who establish the quality to be incorporated in the contract documents are eligible for attendance. Further, construction contractor personnel, including those who are assigned to quality control activities, are encouraged to attend.

## CQM FOR CONTRACTORS

**Long Title:** *Construction Quality Management For Contractors (Revised)*

**784/CEMP-CE**

**Training Length: 16 Hours;**  
**Video Run Time: 1.25 Hours**  
**Continuing Education Units: 1.3**

**Purpose.** This course familiarizes contractor personnel with the Corps of Engineers Construction Quality



Management concepts and procedures.

**Description.** The training is formatted in the following eight modules of instruction: (1) Introduction; (2) Contractor's Review; (3) Quality Management Planning; (4) Preconstruction Conference and Coordination Meeting; (5) Submittals; (6) Quality Management During Construction; (7) Making the System Work; and Optional Module (8) the Resident Management System.

**Prerequisites.** None.

**Special Guidance.** Under the revised requirements of CEGS-01451, Contractor Quality Control, it is mandatory that this course be successfully completed to be approved as the contractor's quality control manager. This is effective in June 1995.

EFFECTIVE 1997: Upon successful course completion certificates are valid for five years.

### DREDGE SAFETY

**Long Title: Floating Plant/ Dredging Safety**

778/CECW-D

**Training Length: 16 Hours;  
Video Run Time: 66 Minutes  
Continuing Education Units: 1.5**

**Purpose.** This course is intended to educate with focus on concepts rather than execution. It provides the student with a basic understanding of floating plant/dredging safety, as well as various types of equipment used in conjunction with floating plant and dredges.

**Description.** This course consist of the following modules of instruction, roles and responsibilities, dredging equipment, lifting equipment and rigging, personnel considerations, training and personal protective equipment, fall protection, environmental conditions/considerations, diving operations, fire prevention and protection, and hazardous energy.

**Prerequisites.** Nominees for this course should include personnel that are assigned to organizational elements that have responsibility for purchasing maintaining, inspecting and operating floating plant and dredging equipment and/or operations.

### DREDGING FUND

**Long Title: Dredging Fundamentals**

754/CECW-D  
CEUs: 1.5

35DGF01A

**Training Length: 16 Hours;  
Video Run Time: 2 Hours  
Continuing Education Units: 1.5**

**Purpose.** This course provides students involved in activities related to the National Dredging Program with

a basic understanding of the dredging process, engineering for dredging projects, and use of dredging equipment.

**Description.** Topics include navigation projects, plans and specifications for dredging, dredging equipment, contracts, construction quality verification, contract estimates, managing river and harbor programs/projects, project justification, and hydrographic surveys.

**Prerequisites.** Students should work in an area that is involved with the National Dredging Program.

### ELEVATOR SAFETY: QV

**Long Title: Quality Verification: Elevator & Escalator Safety**

748/CEMP-CE

35ELE01A

**Training Length: 32 Hours;  
Video Run Time: 2 Hours**

**Purpose.** This course provides the participants with theoretical and practical knowledge of the ASME A17.1a requirements relating to elevator inspection maintenance and testing procedures.

**Description.** The training is organized in the following modules of instruction: (a) Elevators and Escalators; (b) General Requirements; (c) Electric Elevators; (d) Hydraulic Elevators; (e) Escalators and Moving Walks; (f) Auto Transfers and Dumbwaiters; (g) Inclined Elevators; (h) Construction Elevators; (i) Vertical Incline - Wheelchair Lifts; (j) Fire Fighter Service; and (k) Testing.

A field trip is recommended to further enhance this course.

**Prerequisites.** Students should be those persons whose job relates to conveying system design or construction verification. Nominees should be assigned (a) Occupational Series: 0800 and (b) Grade Level: GS-5 to GS-12 or equivalent. Students should have completed the Construction Quality Management (classroom or exportable) course.

### ENVIRONINTERFACE

**Long Title: District/Installation Environmental Interface**

770/USAEC

**Training Length: 8 Hours  
Video Run Time: 42 Minutes**

**Purpose.** This course trains personnel responsible for planning, programming, and/or implementing installation environmental programs, or providing environmental services to military communities.

**Description.** Modules of instruction include (a) overview of the Army's environmental vision and strategy,



(b) providing district environmental services, and (c) environmental responsibilities of the installation.

**Prerequisites.** Nominees should be installation environmental office staff, ARCOM/MACOM environmental office staff, unique environmental staffs, district project managers, and DPW environmental coordinators.

### ERGO COMPLIANCE

**Long Title:** *Environmental Compliance At USACE Facilities Using Environmental Review Guide For Operations (ERGO)*

767/CECW-OA

**Training Length:** 16 Hours;  
**Video Run Time:** 43 Minutes  
**Continuing Education Units:** 1.0

**Purpose.** This course trains personnel who may be asked to do environmental compliance assessments for their workplaces or for other areas relative to the U.S. Army Corps of Engineers civil works mission. These assessments will be conducted using the Environmental Review Guide for Operations (ERGO) manual.

**Description.** Training materials include a 1/2" videocassette, a Facilitator's Guide, and a Student Study Guide. Modules of instruction include (a) Environmental Compliance Requirements, (b) Preparing for the Assessment, (c) Conducting Assessments, (d) Post-Assessment; and (e) Using ERGO as a Proactive Resource.

After completing the classroom portion of this course, a 1-day ERGO onsite assessment should be conducted. The onsite assessment, in conjunction with classroom participation, is mandatory to receive CEU credit.

**Prerequisites.** Nominees should be facility managers, park rangers, project managers, power plant supervisors, lockmasters, district logistic management officers, real estate personnel, or similar positions.

### ETHICS

**Long Title:** *Ethics*

801/CEOC

**Training Length:** 1 Hour  
**Web-Based:** Self-Paced

**Purpose.** In accordance with DoD 5500.7-R, Joint Ethics Regulation (JER), the purpose of this course is to serve as an initial ethics orientation of new employees, refresher training for current employees, or annual ethics training as mandated by the employees' local Office of Counsel.

**Description.** This course provides an overview of the basic rules that guide ethical behavior. Included are those rules addressing conflicts of interest, gifts, travel,

outside activities, post employment issues, and misuse of position. Situational vignettes are presented to test the reader's understanding of each major topic. Reference documentation providing the basis for the most common ethics rules will be briefly discussed. If you want to know more, you can see many of the laws, orders, and regulations that serve as the source of the rules discussed here by visiting the sites referenced in this course.

### HAP EXP

**Long Title:** *Homeowners Assistance Program (Hap) Exportable Version*

773/CERE-RA

49HAP01A

**Training Length:** 12 Hours;  
**Video Run Time:** 42 Minutes

**Goal.** This course provides real estate personnel with specific training on the basic requirements to be followed when establishing and administering the Department of Defense Homeowners Assistance Program (HAP).

**Purpose.** The purpose of this course is to provide specific training to division and district staff with military real estate responsibilities regarding rules and procedures governing the HAP program.

**Description.** The training materials include one 1/2" videocassette, a Facilitator's Guide, and a Student Study Guide. Major topics covered in this course are: (a) Economic Impact of an Installation; (b) Eligibility of Applicants; (c) Application Processing Procedures; (d) Benefits of Private Sale, Government Purchase, or Foreclosure; (e) Acquisition and Closing Procedures; (f) Appeals Process; and (g) Income Tax Consequences.

**Prerequisites.** The student should have a general knowledge of real estate functions and be assigned to or expected to be assigned to a position that requires an understanding of the DOD HAP. These personnel are normally in Occupational Series: 0905, 1101, 1170, or 1171.

### HAZWOPER

**Long Title:** *8-Hour Hazardous Waste Operations and Emergency Response (HAZWOPER) Online Annual Refresher Course*

793/CESO-I

**Training Length:** 8 Hours  
**Web-Based:** Self-Paced

**Purpose.** This course is for United States Army Corps of Engineers' employees responsible for remediating the clean-up of Superfund, former defense, and military installation hazardous waste sites, as well as, respond to emergencies involving the release of hazardous materials. They are required by law (29 CFR 1910.120) to attend an 8-hour annual refresher training



on Hazardous Waste Operations and Emergency Response (HAZWOPER) course to continue employment at treatment, storage, and disposal facilities (TSD's) and at hazardous waste clean-up sites.

**Description.** The HAZWOPER refresher training course include an overview of changes and updates to federal regulations, toxicology, and hazard communication. It also covers updates and changes in hazardous waste site safety plans, site control, decontamination, hazardous waste management, personal protective clothing and equipment, and respiratory protection.

Topic include:

- (a) Review of laws and regulations
- (b) Names of personnel and alternates responsible for site safety and health;
- (c) Safety, health and other hazards present on the site;
- (d) Use of personal protective equipment.
- (e) Work practices by which the employee can minimize risks from hazards;
- (f) Safe use of engineering controls and equipment on the site; and
- (g) Medical surveillance requirements, including recognition of symptoms and signs which might indicate overexposure of hazards.

**Prerequisites.** a. Students must have taken the initial 40-hour HAZWOPER course that meets the requirements of 29 CFR 1910.120 and 1926.65. The student's supervisor shall verify this before enrollment in the course. b. The student's supervisor shall also verify that the student's 8-hour annual training is current (the student must have had an annual refresher within the last three years, otherwise the refresher course can not be taken without prior approval from the local District Chief Safety and Occupational Health Office per USACE policy.) c. The supervisor shall also verify the student to be compliant with the following HAZWOPER training requirement contained in 29 CFR 1910.120 and 1926.65 prior to taking the web-based refresher course: (1) employer safety meetings relevant to duties the student is to perform; (2) reviews and critiques of incidents that have occurred in the past year pertinent to the work performed; (3) informational programs or safety meetings to address hazards and protective measures specific to a particular hazardous waste site or job task; (4) review of the Site Safety and Health Plans (SSHPs) and be familiar with personnel/alternates responsible for site safety and health for the project sites where the student is/will be assigned and; (5) hands-on skill exercises relevant to the selection, use and maintenance of Personal Protective Equipment.

#### HTW ENV LAW/REG 8-HR

**Long Title: Hazardous And Toxic Waste Environmental Laws And Regulations (8-hour Refresher)**

807/CEMP-RT

Training Length: 8 Hours Video Teletraining

**Purpose.** This course provides USACE personnel involved with hazardous and toxic waste (HTW) projects an overview of the application of the comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), as amended by Superfund Amendments and Reauthorization Act of 1986 (SAR); the Resource Conservation and Recovery Act of 1976 (RCRA); and other relevant environmental laws; regulations and policies.

**Description.** Suggested topics include (a) The legislative and regulatory process of environmental laws; (b) The applicability of CERCLA, RCRA, and other major environmental laws and regulations to HTW site investigation and remediation; (c) The importance of interfacing and regulatory agencies on HTW projects; (d) The CERCLA remedial action process and the RCRA corrective action process; (e) The applicability of various environmental laws and regulations preparing and reviewing HTW predesign, design, and construction documents; and (f) The applicability of various environmental laws and regulations when monitoring contract execution.

**Prerequisites.** Nominees should be Grade GS-09 or above, directly involved in the hazardous and toxic waste program for USACE. Nominees should have a baccalaureate in engineering, a scientific discipline, or experience in the hazardous and toxic waste program.

#### INTRO GEN CONST: QV

**Long title: Quality Verification: Introduction To General Construction**

738/CEMP-CE

35QVG01A

Training Length: 32 Hours;  
Video Run Time: 3.2 Hours

**Purpose.** This course provides the participant with an introductory technical knowledge required for the quality verification of all elements of building construction, based on guide specifications, and identifies quality assurance personnel's role as it relates to construction quality management. This course should be a prerequisite for the classroom Quality Verification: General Construction course.

**Description.** The topics covered in this course are divided into ten modules, as follows: (a) Quality Management; (b) Site Utilities/Plumbing; (c) Concrete/Masonry; (d) Structural Steel/Welding; (e) Carpentry/Insulation/Hardware/Tile; (f) Roofing/Sheet Metal; (g) Interior Finishes; (h) Air-Conditioning/Mechanical Insulation; (i) Heating/Air Distribution; and (j) Electrical.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: 0801, 0802, 0809, 0810, 0830, and 0850; (b) Grade: GS-05 or above; (c) Other: Current or projected assignment as quality assurance personnel, construction general or technical personnel, or engineers with verification responsibilities. The fact



that this course is oriented to building construction should be weighed when nominating a civil works candidate. Students should have completed the Construction Quality Management (classroom or exportable) course.

#### **INTRO HAZ WASTE MGT**

**Long Title:** *Introduction To Hazardous Waste Management*

**768/USAEC**

**Training Length: 16 Hours;  
Video Run Time: 1.5 Hours**

**Purpose.** This course trains military and civilian personnel who are responsible for handling, storing, and turning in hazardous materials and waste.

**Description.** Modules of instruction include (a) Introduction/Managing Hazardous Waste; (b) Requisitioning Hazardous Materials; (c) Handling Hazardous Materials; (d) Handling Hazardous Waste; and (e) Turning in Hazardous Waste.

**Prerequisites.** Nominees should be personnel involved in the handling, storage, and turn-in of hazardous materials and waste.

#### **INTRO HAZ WST MGT-ME**

**Long Title:** *Introduction To Hazardous Waste Management - Middle East*

**764/USARCENT**

**Training Length: 16 Hours;  
Video Run Time: 64 Minutes**

**Purpose.** This course trains military and civilian personnel located in the Middle East who are responsible for handling, storing, and turning in hazardous materials and waste.

**Description.** Modules of instruction include (a) Introduction/Managing Hazardous Waste; (b) Requisitioning Materials; (c) Handling Hazardous Materials; (d) Handling Hazardous Wastes; and (e) Turning in Hazardous Waste.

**Prerequisites.** Nominees should be personnel that will be assigned or are currently assigned in the Middle East and are involved in the handling, storing, and turning in of hazardous materials and waste.

#### **INTRO PROJ MGT**

**Long Title:** *Introduction To Project Management*

**762/CECW-LP**

**Training Length: 8 Hours;  
Video Run Time: 2.0 Hours**

**Purpose.** This course provides an introduction to the

principles and techniques of project management as applied within the U.S. Army Corps of Engineers. The first module should be presented during one session and will be offered to all Corps employees independently of the remaining four modules. The other four modules should be presented in two sessions on different days when students are expected to accomplish the hands-on exercises. The first module was fielded in January 1995. The other four modules are under development.

**Description.** Training materials include videocassettes, Facilitator's Guide, and a Student Study Guide.

**Modules:** (a) Understanding Project Management, (b) Defining the Project, (c) Resourcing the Project, (d) Managing the Project, and (e) Evaluating the Project.

**Prerequisites.** Nominees for the first module of this course will be all Corps of Engineers employees. Generally, students who attend the other four modules will be program managers, project managers, technical managers, and project implementation team members.

#### **INTRO TO PROG & PROJ MGT**

**Long Title:** *Introduction to Program and Project Management*

**806/CEMP-M/CECW-B**

**Training Length: 4 Hours;  
Web-Based: Self-Paced**

**Purpose.** This course provides baseline information on the project management business process.

**Description.** This course introduces students to the principles and practices inherent in successful P&PM execution, and those expressed in ER 5-1-11: Program and Project Management. Students will be introduced to the basics of P&PM. The relationships required for successful project execution between the command structure, the team and customer will be explored. The environment in which program and project management is executed, in terms of guiding policies and responsibilities are also discussed. Special attention is given to the business practices that are outlined under ER 5-1-11, as well as process assessment and evaluation.

**Prerequisites.** Nominees should be assigned as team members and leaders who are responsible for designing and executing USACE work.



## INVENTORY MGT

*Long Title: Inventory Management*

798/CELD-MS

**Training Length: 4 Hours;**  
**Web-Based: Self-Paced**

**Purpose.** This purpose of this course is to familiarize personnel of the Corps' policies concerning inventory and financial management and standard inventory practices.

**Description.** Modules of instruction include inventory accounting policy; inventory data conversion instructions; CEFMS inventory management and implementation of the inventory management plan.

**Prerequisites.** This course is open to all logistics management personnel.

## LANDSCAPE PLANT: QV

*Long Title: Quality Verification: Landscape Planting*

755/CEMP-EA

31LQV01A

**Training Length: 16 Hours;**  
**Video Run Time: 1 Hour**

**Purpose.** This course covers verifying, site preparing, excavating, installing, finishing, and accepting turfing and planting of trees, shrubs, ground covers, and vines for construction contracts. Included are uniform methods and procedures to verify and accept turfing and planting contracts. It may be used during preconstruction or coordination meetings to address what is expected of the landscape contractor in terms of turf and plant quality.

**Description.** Topics covered in this course are divided into five modules, as follows: (a) The Preparatory Phase; (b) The Initial Phase; (c) Installation of Plant Material and Turf; (d) The Follow-Up Phase; and (e) The Acceptance Inspection.

**Prerequisites.** Nominees should be assigned (a) GS-05 and above; (b) Occupational Series 0800; (c) as quality assurance personnel who assume landscape contract quality and those in job series who develop landscape specifications. Students should have completed the Construction Quality Management (classroom or exportable) course.

## MASONRY CONST: QV

*Long Title: Quality Verification: Masonry Construction*

752/CEMP-CE

35MCO01A

**Training Length: 12 Hours;**  
**Video Run Time: 1.25 Hour**

**Purpose.** This course discusses the basic requirements for masonry construction for seismic and nonseismic areas for reinforced and nonreinforced bearing and nonbearing walls. Its focus is on areas that quality assurance personnel should consider to identify and correct potential problems during construction.

**Description.** The training materials include a ½" videotape cassette, a Facilitator's Guide, and a Student Study Guide. Topics covered include (a) Applicable Codes, CEGS 04200, 04230, TM 5-809-3; (b) Materials and Approvals: (1) Blocks: hollow non-load bearing, hollow load bearing, solid load bearing, (2) Bricks, (3) Mortar and grout, (4) Vertical and horizontal reinforcement, and (5) Flashings; (c) Sample Panels; (d) Masonry Wall Types: (1) Conventional, (2) Composite wall, and (3) Cavity wall; (e) Concrete Masonry Unit (CMU) Lintels; (f) Bond Beams; (g) Control Joints; (h) Hot and Cold Weather Protection; and (i) QA and QC Requirements.

**Prerequisites.** Students should be assigned to quality assurance duties and have a basic knowledge of quality control quality assurance responsibilities. Students should have completed the Construction Quality Management (classroom or exportable) course.

## NEPA

*Long Title: Military Training And The National Environmental Policy Act (NEPA)*

769/USAEC

35NEP01A

**Training Length: 8 Hours;**  
**Video Run Time: 1.25 Hours**

**Purpose.** This course provides an overview of the NEPA process and how it relates to military training.

**Description.** Modules of instruction include (a) determining the need for environmental documentation, (b) evaluating impacts of training proposals on the environment and project alternatives, (c) preparing environmental documentation, and (d) approving execution of proposal.

**Prerequisites.** Nominees should be personnel involved in the planning and execution of unit training and ranges and planning and construction of unit training facilities on range.

## OP BUD APP NONFIN

*Long Title: Operating Budget Applications For Nonfinancial Managers*

746/CERM-B

42OBA01A

**Training Length: 8 Hours;**  
**Video Run Time: 47 Minutes**

**Purpose.** This course teaches responsibility center managers how to use operating budgets to facilitate



resource decisions, analyze trends, impacts, and operating performance. The course describes cost management theory, defines budget terms and processes, and identifies benefits and applications of operating budgets.

**Description.** Training materials include a ½" videotape cassette, a Facilitator's Guide, and a Student Study Guide. Training is designed to be accomplished in 8 hours.

**Modules.** The ten modules of instruction presented in the course are (a) Understanding Budget Terminology and Process; (b) Determining Mission and Goals; (c) Considering the Total Workload; (d) Forecasting Future Needs/Impacts; (e) Developing an Operating Budget; (f) Making Corporate Decisions Using the PBAC Process; (g) Determining Rates/Rescheduling; (h) Reviewing Cost Versus Budget; (i) Ensuring Effective Resource Management; and (j) Analyzing Final Budget Execution.

**Prerequisites.** Nominees must be responsibility center managers who direct and control resources to accomplish the mission or operation. All occupational series are eligible.

### PERS PLNG MGT

**Long Title: Personnel Planning And Management For Mobilization**

**717/CEMP-PR 48PPM01A**  
**Training Length: 16 Hours**  
**Video Run Time: 1.2 Hours**

**Purpose.** Prepare Civilian Personnel Office personnelists for their role in mobilization planning and management. Upon completion, personnelists should be able to prepare and maintain a mobilization plan that can be executed quickly and efficiently during any national emergency.

**Description.** The training materials include one 1/2" videotape cassette, a Facilitator's Guide, and a Student Study Guide. Personnelists with these assigned duties will be able to describe the mobilization process, and prepare and maintain a mobilization plan. Tasks which must be accomplished in support of mobilization will be the basis for the plan.

**Modules/Submodules.** (a) Introduction to Personnel Planning and Management for Mobilization: (1) General Corps Functions, (2) Human Resources Responsibilities, and (3) Human Resources Office Functional Responsibilities; (b) Position Management and Classification (PM&C): (1) Planning for Mobilization and (2) Implementing Management Procedures; (c) Recruitment and Placement (R&P): (1) Planning for Mobilization and (2) Implementing Management Procedures; (d) Training and Development (T&D): (1) Planning for Mobilization and (2) Implementing Management Procedures; (e) Technical Services (TS): (1) Planning for

Mobilization and (2) Implementing Management Procedures; (f) Management Employee Relations (MER): (1) Planning for Mobilization and (2) Implementing Management Procedures; and (g) Mobilization Model Plan.

**Prerequisites.** Students should be assigned to or expect to be assigned to jobs in a personnel office during mobilization.

### PHYSICAL SECURITY

**Long Title: Physical Security (Revised)**

**719/CEPM-ZB 55PPSO1A**  
**Training Length: 8 Hours;**  
**Video Run Time: 2.25 Hours**

**Purpose.** This course trains Corps of Engineers employees, project managers, and supervisors of civil works projects to recognize, evaluate, implement, and maintain the physical security posture of their facilities.

**Description.** The topics covered are divided into eight modules as follows: (a) Protecting Our Natural and National Resources; (b) Physical Security Planning; (c) Protective Measures and Deterrence; (d) Inspection Procedures; (e) Physical Security Requirements for Corps Facilities; (f) Coordination; (g) Preparation for Mobilization and National Emergencies; and (h) Project Physical Security Plan.

This course contains practical exercises that are situation-dependent. Additional time should be allowed for each optional practical exercise scheduled by the facilitator.

**Potential Students.** This course is designed for all managers and supervisors of Corps civil works projects, security personnel, ranger personnel, and any employee desiring an increased awareness of physical security.

### RETRAINING

**Long Title: Real Estate Training In Support Of Mobilization (Revised)**

**724/CERE-R 49RET01A**  
**Training Length: 40 Hours;**  
**Video Run Time: 2.5 Hours**

**Purpose.** This course trains Corps real estate personnel who already know civil policies, procedures, functions, and forms for basic operations in civil works acquisition how to perform military realty functions. The exportable training course provides the trainee with instruction in various areas of military real estate activities.

**Description.** Training is presented in 14 modules of instruction covering the following topics: (a) Real Estate and Mobilization; (b) Authorities and Policies; (c) Development and Approval of Requirements; (d) Plan-



ning, Analysis, and Programming; (e) Approvals and Clearances; (f) Direct Purchase of Permanent Interests; (g) Leasing of Real Property; (h) Miscellaneous Interests; (i) Condemnation; (j) Relocation Assistance Services; (k) Relocation, Alteration, Vacation, or Abandonment of Highways, Roads, Railroads, Utilities, and Cemeteries; (l) Functions of the Management and Disposal Division; (m) Functions of the Programs Division; and (n) Planning for Future Mobilization. These modules are further divided into 31 submodules.

This exportable training course has two ½" videocassettes, a Facilitator's Guide designed to assist the facilitator in leading the training, Student Study Guides containing job performance aids, task-active exercises for "hands-on" experiences, sample forms, references, and an acronym list. Training encompasses approximately 2.5 hours of video instruction broken into training segments of 5-15 minutes. Total training requires approximately 40 hours of interaction between the students and the facilitator.

**Potential Students.** This course is designed primarily for realty specialists. However, the instruction is beneficial for supervisors and other Corps realty employees.

### ROLLER COMP CONCRETE

**Long Title: Quality Verification: Roller Compacted Concrete**

**749/CECW-EG 35ERC01A**  
**Training Length: 16 Hours\*;**  
**Video Run Time: 2 Hours**

\* This course is divided into two sections: one for mass and one for pavements. Each section has a video run time of approximately 1 hour each. Training credit of 16 hours should be given for each section.

**Purpose.** This course provides detailed information on the placement and verification of roller compacted concrete. Roller compacted concrete (RCC) is becoming very popular within the Corps of Engineers due to its economic and fast construction factors. This course provides the knowledge for the new technique.

**Description.** This course covers both RCC mass and RCC pavements. RCC mass is discussed in Modules 1-5. RCC pavement is discussed in Modules 6-10. Each section's video run time is approximately 1 hour each.

MASS-Modules: (1) QA Duties and Responsibilities; (2) Materials, Preparation, Test Section and Sampling and Testing; (3) Concrete Plant and Execution; (4) Design and Construction Considerations; and (5) Special Considerations.

PAVEMENTS - Modules: (6) QA Duties and Responsibilities; (7) Materials, Preparation, Test Section and Sampling and Testing; (8) Measuring, Mixing, and

Transportation; (9) Joints; and (10) Weather and Safety.

**Prerequisites.** Nominees should be personnel who are interested in expanding their knowledge of roller compacted concrete placement, especially construction quality assurance personnel, engineering specifiers, and those responsible for maintenance, such as DEH personnel. Students should have completed the Construction Quality Management (classroom or exportable) course.

### ROOFING TECHNOLOGY

**Long Title: Roofing Technology**

**744/CEMP-ES 35RTQ01A**  
**Training Length: 24 Hours;**  
**Video Run Time: 1.7 Hours**

**Purpose.** This course provides an overview on all low-slope roofing systems. Students are presented a broad spectrum of both theoretical and practical aspects of design, specifications materials selection and compatibility, application workmanship, maintenance, repair, and quality assurance for various roofing systems.

**Description.** Training materials include one ½" videotape cassette, a Facilitator's Guide, and a Student Study Guide. Training is designed to be accomplished in 3 full days.

**Modules.** The topics covered in this course are (a) Overview; (b) Structural Decks; (c) Roofing Drainage; (d) Vapor Retarders; (e) Insulation; (f) Built-Up Roofing; (g) Flashing; (h) Metal Roofs; (i) Protected Membranes; (j) Shingles; (k) Single-Ply Systems; (l) Forensic Problems; (m) Construction Conferences; (n) Construction Inspection; (o) General Maintenance Procedures; (p) Single-Ply Maintenance; (q) Maintenance of Built-Up Roofs; (r) Nondestructive Moisture Surveys; and (s) Factory Mutual and the Underwriters' Laboratory.

**Prerequisites.** This course is designed for personnel who are interested in expanding their knowledge of roofing systems, especially Construction Quality Assurance personnel, architects, engineers, specifiers, and persons responsible for maintenance. Students should have completed the Construction Quality Management (classroom or exportable) course.

### S&H FOR HWS 8-HR ARMY

**Long Title: Safety And Health For Hazardous Waste Sites - 8 Hour Refresher - Army (Video-Based)**

**766/USAEC 58SHW01A**  
**Training Length: 8 Hours;**  
**Video Run Time: 3.41 Hours**

**Purpose.** This course will enable participants who have previously completed the OSHA-mandated 40-hour training to meet their annual refresher training



requirements as specified by 29 CFR 1910.120. This course may also be used as HWS safety and health information/awareness training for persons not required to attend the initial training addressed by 29 CFR 1910.120.

**Description.** Modules of instruction include an introduction, lessons learned, planning/control structures, hazards, personal protective equipment (PPE), safe work practices, site control, medical surveillance, site safety and health plan (SSHP) and information update.

**Prerequisites.** This course is designed for personnel who are directly involved in hazardous waste operations and management, and who have previously completed the 40-hour Safety and Health for Hazardous Waste Sites Course or other qualifying 40-hour safety and health courses for uncontrolled hazardous waste sites meeting the OSHA requirements of 29 CFR 1910.120 and 29 CFR 1926.65. It may also be used for information/awareness training of individuals who have no mandatory requirement to attend the training specified by 29 CFR 1910.120 or 29 CFR 1926.65. The Primary Facilitator for this course must be a Certified Safety Professional (CSP) or Certified Industrial Hygienist (CIH) with a minimum of one year of experience in hazardous waste operations. The Primary Facilitator may use assistant facilitators from pertinent disciplines to aid in the instruction specific to their area of expertise, when determined beneficial to the success of the training.

### **S&H FOR HWS 8-HR CORPS**

**Long Title: Safety And Health For Hazardous Waste Sites - 8 Hour Refresher - Corps (Video-Based)**

**766/CESO-I** **58SHW01A**  
**Training Length: 8 Hours;**  
**Video Run Time: 1.5 Hours**

**Goal.** This course provides participants with 8-hour safety and health refresher training as specified by the U.S. Occupational Safety and Health Administration's 29 CFR 1910.120 requirements.

**Purpose.** The course is designed for USACE team members involved in uncontrolled hazardous, toxic waste site operations under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), the Resource Conservation and Recovery Act (RCRA), Remedial Actions and the Defense Environmental Restoration Program (DERP) of Formerly Used Defense Sites (FUDS), and the Installation Restoration Program (IRP).

**Description.** Training materials include ½" videotape cassettes, a Facilitator's Guide, and a Student Study Guide. In accordance with OSHA, course topics include names of personnel and alternates responsible for site safety and health; safety and health hazards present on the site; use of personal protective equip-

ment; work practices to minimize risks from hazards; medical surveillance requirements, safety and health programs; site-specific plans; decontamination procedures; emergency response plans; confined space entry procedures; and spill containment.

**Prerequisites.** (a) An initial 40-hour Safety and Health for Hazardous Waste Sites Course or other qualifying 40-hour safety and health course for uncontrolled hazardous waste sites meeting OSHA requirements 29 CFR 1910.120 and 29 CFR 1910.121. (b) Nominees should be team members directly involved in hazardous waste operations and management. (c) Persons responsible for the safety and health of Corps team members should have a degree in science or engineering and/or equivalent amount of relevant practical experience. (d) The course facilitator must have completed the Facilitator Training course.

### **STRUC STEEL FASTNERS**

**Long Title: Structural Steel Fasteners**

**747/CEMP-CE** **35SSF01A**  
**Training Length: 16 Hours;**  
**Video Run Time: 1.4 Hours**

**Purpose.** This course provides the participant with the basic technical knowledge required to identify counterfeit bolts and provides instruction to quality assurance personnel on methods to assure the construction contractor is providing contract specific fasteners and installing them properly. The course sequence is consistent with Corps quality assurance principles.

**Description.** Topics covered in this course are divided into 9 modules, as follows: (a) Structural Steel Fasteners; (b) Plans and Specifications; (c) QA Planning; (d) Coordination Meeting; (e) Construction Quality Control (CQC) Plan; (f) Shop Drawings; (g) Preparatory Phase of Control; (h) Initial Phase of Control; and (i) Follow-up Phase of Control.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: 0802, 0809, 0810; (b) Grade: GS-05 or above; (c) Other: Current or projected assignment as quality assurance personnel, technical or engineer, with verification responsibilities. Students should have completed the Construction Quality Management (classroom or exportable) course.

### **VISITOR SURVEYS**

**Long Title: Visitor Surveys For Developed Recreation Areas**

**750/CECW-ON** **54VSD01A**  
**Training Length: 4 Hours;**  
**Video Run Time: 41 Minutes**

**Purpose.** This course provides prospective survey interviewers with the skills necessary to collect field recreation use data in developed recreation areas.



**Description.** Modules of instruction include (a) Explaining Visitor Surveys; (b) Collecting Materials for Surveys; (c) Reading Survey Meters; (d) Setting up the Survey Site; (e) Surveying the Visitor; (f) Taking Down the Survey Site; and (g) Delivering the Data. The course consists of one VHS video tape, a Facilitator's Guide, and a Student Study Guide. The course facilitator should be familiar with visitor survey techniques.

**Prerequisites.** Nominees should be those persons who conduct traffic stop surveys at Corps projects. Introduction to computers and DOS-based systems training is helpful.

## AVAILABILITY & COST OF DISTANCE LEARNING COURSES

### Corps of Engineers

Distance Learning course materials are available for use by the Corps of Engineers. For information about the Distance Learning Program, contact your district or division training officer.

### Non-Corps Agencies

Although distance learning courses are developed to meet the Corps' specific training needs, the courses can be used by other agencies to meet their training needs. All distance learning courses can be obtained by non-Corps agencies based on an established cost per course set. The course cost is based on the development costs. The FY01 costs are as follows:

8-Hour Hazardous Waste Operations and Emergency Response (HAZWOPER) OnLine Annual Refresher Course (Web Based) .....	\$95 per student
Basic Financial Management (Web-Based) .....	\$35 per student
Basic Spills Response at Civil Works Facilities .....	\$600
Budget Principles for Operating Budget Preparation and Analysis .....	\$500
Computer Security .....	\$600
Construction Quality Management (Revised) ...	\$875
Construction Quality Management - CD-ROM .....	TBD
Construction Quality Management for Contractors (Revised) .....	\$625
Contracting Overview (Revised) .....	\$1650
Contractor's Quality Control and Quality Assurance - A Bridge to Success .....	\$125
District/Installation Environmental Interface .....	\$375
Dredging Fundamentals .....	\$800
Effective Use of Business Graphics .....	\$500
Environmental Compliance at USACE Facilities Using Environmental Review Guide for Operations (ERGO) .....	\$375



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Fiscal Year 2001

Ethics (Web-Based) .....	N/C	Roofing Technology .....	\$1350
Floating Plant/Dredging Safety .....	\$500	Safety and Health for Hazardous Waste Sites - 8 Hour Refresher - Army .....	\$225 (Video-Based)
Hazardous and Toxic Waste Environmental Laws and Regulations (8-Hour Refresher) (Video Teletraining) .....	TBD	Safety and Health for Hazardous Waste Sites - 8 Hour Refresher - Corps .....	\$225 (Video-Based)
Homeowners Assistance Program (HAP) Exportable Version .....	\$340	Structural Steel Fasteners .....	\$700
Introduction to Hazardous Waste Management .....	\$750	Visitor Surveys for Developed Recreation Areas .....	\$335
Introduction to Hazardous Waste Management - Middle East .....	\$500	ADDITIONAL STUDENT STUDY GUIDES .....	\$20
Introduction to Programs and Project Management (Web-Based) .....	TBD	ADDITIONAL FACILITATOR GUIDES .....	\$25
Introduction to Project Management .....	\$1000	ADDITIONAL STUDENT STUDY GUIDES - CQM FOR CONTRACTORS .....	\$15 (NO BINDERS)
Inventory Management (Web-Based) .....	N/C	ADDITIONAL FACILITATOR GUIDES - CQM FOR CONTRACTORS .....	\$20 (NO BINDERS)
Military Construction Design for Mobilization .....	\$700	<b>PROCEDURES FOR PURCHASING DISTANCE LEARNING COURSES</b>	
Military Training and the National Environmental Policy Act (NEPA) .....	\$625	The Distance Learning Training Program is a pay as- you-go system. This means that each course must pay for itself. Therefore, agencies purchasing a distance learning course are required to forward funds to the U.S. Army Engineering and Support Center, Huntsville, to cover the purchase prior to our shipping course materials to the agency.	
Operating Budget Applications for Nonfinancial Managers .....	\$500	Reimbursement for course materials can be by an Intra-Army Order for Reimbursable Services (IAO), DA Form 2544, or a Military Interdepartmental Purchase Request (MIPR), DD Form 448. Web-based students can submit DD 1556s or MIPRs for training costs. The IAO or MIPR should be sent to:	
Personnel Planning and Management for Mobilization .....	\$650	Commander U. S. Army Engineering and Support Center, Huntsville ATTN: CEHNC-RM-B P.O. Box 1600 Huntsville, AL 35807-4301	
Physical Security (Revised) .....	\$1250	For all types of distance learning course the IAO or MIPR should state the title of the course, billing address and shipping address for any materials. If materials are requested, the number of video sets, FGs, SSGs, floppy disks and/or CDs should be indicated.	
Quality Verification: Basic Welding .....	\$900	You may obtain information on distance learning courses by telephone, fax, or letter to the Corps of	
Quality Verification: Concrete (Revised) .....	\$2150		
Quality Verification: Construction Safety .....	\$900		
Quality Verification: Elevator and Escalator Safety .....	\$950		
Quality Verification: Introduction to General Construction .....	\$1500		
Quality Verification: Landscape Planting .....	\$500		
Quality Verification: Masonry Construction .....	\$650		
Quality Verification: Roller Compacted Concrete .....	\$1000		
Real Estate Training in Support of Mobilization (Revised) .....	\$1800		



Engineers, Professional Development Support Center.

Commander  
USACE Professional Development  
Support Center  
ATTN: CEHR-P-DL  
P.O. Box 1600  
Huntsville, AL 35807-4301  
Fax Number: 256-895-7481  
Telephone Number:  
Commercial: 256-895-7417/7419/7418/7413/7429  
Web Site: <http://pdsc.usace.army.mil>

quality training to the students through addition of local flavor to the instruction, and be able to answer unanticipated questions from the students.

<u>Session</u>	<u>Location</u>	<u>Date</u>
01-01	Huntsville, AL	12-15 Feb 01

### FACILITATOR TRAINING

The Professional Development Support Center offers, through the proponent sponsored classroom program, a course designed to train individuals in the methodology necessary to facilitate the exportable courses described in this catalog.

The Facilitator Workshop is available as a tuition-paid course with sessions offered in Huntsville, Alabama. Onsite sessions are also available.

For information about course cost and session dates, contact the Registrar Office, telephone:256-895-7421/7422/7425.

### FACILITATOR WORKSHOP

*Long Title: FACILITATOR WORKSHOP*

**016/CEHR-P** **48FAW01A**  
**Course Length: 32 Hours**  
**Tuition: \$700.00**

**Purpose.** The PROSPECT Program offers training is video-based training which is designed for small group instruction at the work site by a local facilitator. The training content, format, and presentation methodology are unique to the Corps. The purpose of this course is to train individuals in the methodology necessary to successfully facilitate this Corps-peculiar training.

**Description.** Through lectures, demonstrations by instructors, and practical exercises by the students, this course covers local responsibilities for the exportable training, materials organization, presentation methodology, scheduling, reporting requirements, and methods to supplement the prepared training materials.

**Prerequisites.** Nominees should be assigned (a) Occupational Series: All; (b) Grade: All. This workshop is strongly recommended for anyone responsible for delivering any of the PROSPECT exportable training courses. Nominees do not necessarily have to have subject matter knowledge or expertise in the subject areas to successfully facilitate a course. The facilitator with subject matter knowledge will be more comfortable with the assigned duties, be able to provide better



#### 4-A ENVIRONMENTAL TRAINING

The courses listed in Section 4-A are being developed to meet specific needs of DOD Environmental Stewards. These courses will eventually be assigned by the Interservice Environmental Education Review Board (ISEERB) to a Lead Service School for implementation.

Inclusion of these courses at this time is for determining course participation need and interest.

Section 4-B describes the mission and products of the Installation Support Training Division's Environmental Training Branch.

#### BIODIVERSITY

##### *Long Title: Conserving Biodiversity On Military Lands*

961

**Purpose.** Web-based. Assists DOD natural resources personnel in managing installations for the preservation, restoration, enhancement, and maintenance of biodiversity. The course is for both military and civilian natural resources policymakers at all levels. The course is accessible over the Internet, and is self-paced and modular in format. There are four subject matter modules with each related to, but independent of the others: Introduction to Managing for Biodiversity on Military Lands; Putting Biodiversity Theory Into Practice; Developing A Biodiversity Management Action Plan (Biomap); and Monitoring and Measuring Biodiversity.

**Description.** An individual can access the modules in any order deemed most relevant to his needs. Each module is the equivalent of one hour of self-paced instruction in front of a terminal. Each module of instruction is subdivided into three modules representing approximately 15 minutes each of self-paced instruction. The submodules also include a 5-minute multiple choice test at the end of each session. Consequently, a submodule unit of instruction can represent approximately 20 minutes spent before a terminal. Completion of 3 submodule units of instruction equals the completion of a module and will be the equivalent of approximately 1-hour of instruction. These calculations of time spent before a terminal do not include possible time spent on links to other web sites or communications with others accessing a course on other installations. Completion of all modules will signal completion of the course. Web features include links to other web sites, communications between individuals taking the course at different installations, registration information that includes identification of the service represented by the individual taking the course, graphics, video, photos, and other multimedia enhancements. A pre-test and post-test are administered for each module.

#### ICRMP

##### *Long Title: Integrated Cultural Resources Management Plan*

962

**Purpose.** Web-based. The ICRMP is the installation Commander's planning and control document for guiding and carrying out cultural resources conservation activities at a specific DOD installation. This course identifies and discusses requirements for developing an ICRMP that is both effective and compliant.

**Description.** Discussions cover legal, regulatory, survey, and content requirements, as mandated by various Federal laws and regulations, DOD Instructions and Directives, and service-specific military regulations. This course is for three audience groups: Qualified Cultural Resources Managers, if available and assigned to specific installations; Contractors or consultants hired to prepare ICRMPs for target installations; and military planners assigned to assist in the ICRMP preparation process. The course is between two and three hours in length. It consists of six major modules: Introduction — Definitions, Objectives, and Responsibilities; Legal and Regulatory Compliance; Contractor Support Issues; Guidance for ICRMP Preparation; Content Requirements; and Reference Material. A Content Checklist is included for ICRMP developers.

#### INRMP

##### *Long Title: Integrated Natural Resources Management Plan*

963

**Purpose.** Web-based. The INRMP is the installation Commander's planning and control document for guiding and carrying out natural resources conservation activities at a specific DOD installation. Preparation and approval of an INRMP is mandatory for all DOD installations, unless specifically exempted.

**Description.** This course identifies and discusses requirements for developing an INRMP that is both effective and compliant. Discussions cover legal, regulatory, survey, and content requirements, as mandated by various Federal laws and regulations, DOD Instructions and Directives, and service-specific military regulations. This course is for three audience groups, as applicable: Qualified Natural Resources Managers, if available and assigned to specific installations; contractors or consultants hired to prepare INRMPs for target installations; and military planners assigned to assist in the INRMP preparation process. The course is between two and three hours in length. There are six major modules: Introduction — Definitions, Objectives, and Responsibilities; Legal and Regulatory Compliance; Contractor Support Issues; Guidance for INRMP



Preparation; Content Requirements; and Reference Materials. A Content Checklist is included for INRMP developers.

### INTRO TO NCR

**Long Title:** *Introduction to Natural and Cultural Resources*

964

**Purpose.** Video-based. Overview on natural and cultural resources and how effective land management supports the accomplishments of the military mission.

**Description.** The course offers awareness-level training that includes: legal compliance requirements; assistance from non-profit organizations and other government agencies. Instruction is primarily focused on events that impact the conservation of air, land, water, and cultural resources. A desk reference is provided to each student as a job performance aid. The video-based instruction includes an instructional video, Facilitator Guide, and Student Study Guide. The target audience includes selected military, civilian, and contractor personnel within DOD and U.S. Coast Guard who, as a part of their job, need introductory instruction in the roles of natural resources and cultural resources in DOD.

### INVASIVE SPECIES

**Long Title:** *Invasive Species on Military Lands*

965

**Purpose.** Web-based. Assists DOD natural resources personnel in managing installations for the prevention and management of invasive species. Designed for both military and civilian natural resources policy makers at all grade levels. Accessible over the Internet, and is self-paced and modular in format. There are three modules with each related to, but independent of the others: Introduction to Invasive Alien Species as a Natural Resources Management Responsibility on Military Installations; The Prevention of Invasive Alien Species on Military Lands; and The Management of Invasive Alien Species on Military Lands.

**Description.** An individual can access the modules in any order deemed most relevant to their needs. Each module will be the equivalent of one hour of self-paced instruction in front of a terminal. Each one hour module of instruction will be subdivided into three submodules representing approximately 15 minutes each of self-paced instruction. The submodules also include a 5-minute multiple choice test at the end of each session. Consequently, a submodule unit of instruction can represent approximately 20 minutes spent before a terminal. Completion of 3 submodule units of instruction equals the completion of a module and will be equivalent of approximately 1-hour of instruction. These

calculations of time spent before a terminal do not include possible time spent on links to other web sites or communications with others accessing the course on other installations. Completion of all modules signals completion of the course. Web features include links to other web sites, communications between individuals taking the course at different installations, registration information that includes identification of the service represented by the individual taking the course, graphics, video, photos, and other multimedia enhancements. A pre-test and post-test is administered for each module.

### MARINE MAMMALS

**Long Title:** *Marine Mammals Awareness*

966

**Purpose.** Web-based with CD-ROM. The course will be presented in three independent modules. Module One is an Introduction to the Laws and Regulations Governing Marine Mammals, including the Marine Mammal Protection Act (MMPA) and the Endangered Species Act. The concept of "take" is discussed, as are exceptions, authorizations, and permits under the MMPA. Modules Two and Three provide detailed instruction on identification of marine mammals of special significance, and the marine mammals commonly encountered in DOD and USCG areas of operation. Module Two focuses on whales, dolphins and porpoises; and Module Three focuses on Pinnipeds and other Marine Mammals. Module Four provides instruction in completion of sighting forms, and entanglement and boat collision reports.

**Description.** Course delivery is through computer-based training, and will be delivered to the student on a CD-ROM. Students must have a 486 DX66 or SX computer (Pentium preferred) with 8 MB RAM minimum (12 MB recommended) running Windows 3.1 (or later) or Windows NT 3.51 or later. A standard 4.0 browser, CD-ROM player and video card are also required. Preferred configuration includes a sound card and speakers, and access to the Internet.

**Prerequisites.** Audience Description: Module One: All personnel with any interactions with marine mammals: Natural resources managers, wildlife biologists, shipboard personnel, aids to navigation teams, legal staff, and outdoor recreation, public affairs, and real estate/property personnel. Modules Two and Three: Personnel with responsibilities for identifying marine mammals: Natural resources managers, wildlife biologists, shipboard personnel, and aids to navigation teams. Module Four: Personnel responsible for completing and processing sighting forms, entanglement reports, and boat collision reports.



## NAT RES COMPLIANCE

### *Long Title: Natural Resources Compliance*

967

**Purpose.** Video-based. Instruction in specific natural resources laws, regulations, policies, Executive Orders, DOD Instructions, and other guidance, noting Service-specific requirements.

**Description.** Instruction includes National Environmental Policy Act; Fishing, Game, and Wildlife Management Laws; Wetlands, Waterways, and Other Ecological Areas; Forest Land Use Management Laws; and Interservice Cooperation. Practical exercises and guest speaker (s). Natural and cultural resources managers and personnel, environmental lawyers (or lawyers in that capacity), civil works natural resources managers (U.S. Army Corps of Engineers), natural resources law enforcement personnel, and environmental staffs.

## TES ON MIL LANDS

### *Long Title: Threatened and Endangered Species (TES) on Military Lands*

968

**Purpose.** Video-based. Provides information necessary to help installations attain and maintain compliance with existing laws, regulations, directives, instructions, and policies pertaining to the protection and management of threatened and endangered species on and around military and Coast Guard lands.

**Description.** For those personnel in a natural resource management team who advise commanders and perform tasks to prevent violations pertaining to threatened and endangered species. Modules include: Overview; Inventorying and Monitoring TES; Protecting TES; Recovery and Enhancement TES; and Accomplishing Protection of TES in Harmony with the installation.

## WETLANDS ON MIL LANDS

### *Long Title: Wetlands on Military Lands*

969

**Purpose.** Video-based. Provides information necessary to help installations attain and maintain compliance with existing laws, regulations, directives, instructions, and policies pertaining to the protection and management of wetlands on and around military and Coast Guard lands.

**Description.** For those personnel in a natural resource management team who advise commanders and perform tasks to prevent violations pertaining to wetlands. There are five modules: Overview of Wetlands Management; Delineating and Inventorying Wetlands

on and Around the Installation; Protecting and Preserving Wetlands on the Installation and Those Wetlands Around the Installation That May be Affected by the Military Mission; Enhancing the Wetlands Environment Through Mitigation, Creating New Wetlands, and Banking Wetlands; and Accomplishing the Military Mission in Harmony with Management of Installation and Area Wetlands.

## 4-B INSTALLATION SUPPORT TRAINING DIVISION

### ENVIRONMENTAL TRAINING BRANCH

Environmental Training Branch of the Installation Support Training Division provides environmental training program support service for the Army and Department of Defense. The Environmental Training Branch identifies and evaluates deficiencies for environmental stewardship training programs, and maintains environment training resources and materials.

### RESOURCES

Acquires and catalogs environmental training and awareness materials. Distributes to the customer.

Answers inquiries on environmental training resources.

Locates and evaluates environmental training materials.

Maintains the Defense Services Directory of Environmental Education and Training/Tools Catalog.

Maintains a database of environmental training materials.

### TRAINING SUPPORT

Conducts training needs analyses for environmental programs Army wide.

Assists in design, development and/or contracting of environmental training courses resulting from needs analyses or as requested.

Provides Army-wide environmental training services (including OCONUS and Reserve Components).

Recommends and structures training solutions.

Assists installation personnel with environmental staff training.

Develops organization-specific environmental training products, i.e., soldiers' field cards, videos, job aids.

Develops Integrated Training Area Management (ITAM) products.

Coordinates with other Army schools for training.



Interfaces with DoD through Interservice Environmental Education Review Board (ISEERB) membership and Legacy training representatives.

#### **PRODUCTS AND PROJECTS**

- Environmental Compliance and Awareness Training Survey (ECATS).
- Specific environmental posters tailored to the needs of the installation.
- DoD Natural and Cultural Resources Awareness Videotape.
- Assistance with Hazardous Waste Management: checklists, SOPs, plans, etc.
- Portable environmental displays for loan.
- ITAM Product Development
- Earth Day related material.
- Defense Services Directory of Environmental Education and Training/Tools Catalog.
- Exportable Courses: Safe Transportation of Hazardous Materials; Introduction to Hazardous Waste Management, Storm Water Management; District/Installation Environmental Interface; Emergency First Responder, Awareness & Operations Levels; Safety and Health at Hazardous Waste Sites (8-hr refresher); and The National Environmental Protection Act (NEPA) and Military Training.
- Unit Level Hazardous Materials and Hazardous Waste Handbook. (Also available on disk).
- Environmental Compliance and Assessment System (ECAS) Videotape.
- Limited Entry for Maneuvers and Training (LEMAT) Stakes (also known as SIBER or SEIBERT Stakes) for use of DoD standardization in the marking of off-limit areas because of environmental or other concerns.

#### **ELECTRONIC SOURCES OF ENVIRONMENTAL INFORMATION**

- DEFENSE ENVIRONMENTAL NETWORK FOR INFORMATION EXCHANGE (DENIX).  
<http://denix.cecer.army.mil/denix/denix.html>
- World Wide Web Address  
<http://pdsc.usace.army.mil>

Installation Support Environmental Training POC:  
Terry Bashore, Ph.D.  
Environmental Programs Manager  
(256) 895-7414  
[Terry.Bashore@HND01.usace.army.mil](mailto:Terry.Bashore@HND01.usace.army.mil)



### 5-A FEDERAL EXECUTIVE INSTITUTE (FEI)

The Federal Executive Institute offers three types of residential programs at its Charlottesville, Virginia, campus: 4-week Leadership for a Democratic Society, 1-week Work Team Development Programs, and 1-week alumni programs.

#### NOMINATION PROCEDURES

Annually, HQDA allocates spaces for the 4-week Leadership for a Democratic Society program. (USACE Commands interested in the 1-week Work Team Developmental or Alumni Follow-Up programs are advised to contact FEI directly.) HQUSACE (CEHR-D) requests nominations from all USACE commands and selections are made by the Human Resources Development (HRD) Subcommittee based on the following criteria: performance, employee's statement of interest, prior training, and Commander's endorsement. For more information on the program, you should access websites: [www.opm.gov](http://www.opm.gov) and/or [www.cpol.army.mil](http://www.cpol.army.mil).

#### ADDRESS

**FEDERAL EXECUTIVE INSTITUTE**  
**1301 Emmet Street**  
**Charlottesville, VA 22903-4899**  
**Telephone: (804)980-6200**

#### FUNDING

All costs are the responsibility of the nominating USACE command.

#### STUDENT NOTIFICATION

HQUSACE (CEHR-D) will announce selections through HROs/CPACs. FEI will provide read-ahead material to selectees no later than 2 weeks preceding the start of the scheduled class session.

### THE LEADERSHIP FOR A DEMOCRATIC SOCIETY PROGRAM

**Course Length: 160 Hours;**  
**Location: Charlottesville, VA**

**PURPOSE.** This program is designed to meet the executive development needs of senior level officials in the Federal Government who are already highly skilled in their technical specialties and in the programmatic and administrative processes of their own agencies. The program assumes that executives are concerned about leadership at the executive level and are interested in exploring, with their peers from other agencies, the essence of public service management - a "second profession" that each of them enters when they become a senior official in their agencies. The program also assumes that executives are highly motivated, particularly when assessing their own capabilities, identifying areas in which they need additional development or exposure, and participating in courses which they select to meet their own needs.

**DESCRIPTION.** The most current information can be accessed on the internet at [www.opm.gov](http://www.opm.gov) and/or [www.cpol.army.mil](http://www.cpol.army.mil). This program emphasizes a performance-based approach to individual development and leadership in the federal context. The fundamental program objective is to link individual development to improved organizational performance. The program addresses the active leadership role expected of career senior managers and the democratic values and beliefs that underpin that leadership. The theme of "specialist to generalist to leader" is integrated throughout the program as participants focus on innovative federal management practice through access to distinguished speakers and week-long classes that stress the strategic view of executive management and human resource development.

**PREREQUISITES.** The most current information can be accessed on the internet at [www.opm.gov](http://www.opm.gov) and/or [www.cpol.army.mil](http://www.cpol.army.mil). Leadership For A Democratic Society is designed to meet the needs of key federal executives in the public sector. Priority for accepting participants into the program will be given in the following order:

1. SES members and those in equivalent positions in other federal pay systems.
2. GM-15 high potential managers and those GM-15s enrolled in or who have completed an approved SES Candidate Development Program.
3. A select number of executives at the equivalent levels from state, local, or foreign governments, from nonprofit organizations, and from the private sector.



## **5-B MANAGEMENT DEVELOPMENT CENTERS**

### **NOMINATION PROCEDURES**

The most current information can be accessed on the internet at [www.opm.gov](http://www.opm.gov) and/or [www.cpol.army.mil](http://www.cpol.army.mil).

### **AUDIENCE**

Specific eligibility criteria for each seminar are listed in course descriptions.

### **LENGTH OF SEMINARS**

Most are 2 weeks; however, a few are 1-week long. The Management Development Centers offer four kinds of seminars:

1. Leadership and Management Development (Seminar for New Managers, Management Development Seminar, and Executive Development Seminar) are the foundation seminars required for those government managers who need to go beyond their immediate organizational perspective to truly understand the breadth and responsibility of their profession as leaders within the Executive branch of government. They serve to strengthen the sense of corporate identity among the government's leadership corps as individuals progress through the leadership ranks. These programs emphasize the critical Constitutional role of the Federal manager and executive in carrying out the policies and priorities of the President. They focus on leadership, provide knowledge and promote understanding of key Administration and Congressional initiatives, and develop those competencies that have been identified by ongoing research as necessary to successful executive and managerial performance.
  - Seminar for New Managers
  - Management Development Seminar
  - Executive Development Seminar
2. Leadership and Management Assessment Programs expose participants and organizations to a variety of assessment instruments, simulations, exercises, and feedback methodologies. These programs are designed to help managers and executives in effective career development and in proving leadership practices.
  - Leadership Assessment Program
  - Management Assessment Program
  - Executive Assessment Program

3. Supervisory and Team Leadership Institute was established to open our programs to a broader range of current and future leaders to help begin the development of a sense of corporate culture earlier in the potential executive's career. These programs are designed to complement our Core Curriculum seminars. They are open to participants at GS-11 and above and are designed around the critical competencies needed as a new supervisor, a team leader, or team member. They will help individuals to examine the competencies needed to enter supervision and to progress further in their development as a future government manager.
  - Leadership Potential Seminar
  - Team Building and Team Leadership
  - Developing High Performing Teams
  - Managing Project Teams
  - Supervisory Leadership Seminar
4. Public Policy and Contemporary Government Issues Seminars provide a forum for career government managers and executives to address key Administration policy implementation issues with senior policy officials and experts from academia and the private sector. This opportunity for interaction between senior level policy implementers is one of the unique strengths of the Management Development Center system. During workshops, participants explore policy issues relevant to their own agencies and programs and to larger national concerns.
  - Alternative Dispute Resolution
  - Developing Customer-Focused Organizations
  - Dynamics of Public Policy
  - Enterprise Government Management
  - Environmental Policy Issues
  - Executive Communications Workshop
  - Executive Forum on Current Issues
  - Federal Budgetary Policy and Processes
  - Federal Human Resources Management
  - Government Performance and Results
  - Management of Information Technology
  - National Security Policy
  - Natural Resources Seminar: Policies and Issues
  - Science, Technology, and Public Policy
  - Strategies to Build High Performing Organizations
  - Transferring Federal Technology: An Introduction
  - Transferring Federal Technology: Advanced Seminar in Effective Strategies
  - United States Foreign Policy Seminar



## LONG TERM TRAINING (LTT)

A variety of LTT opportunities are provided by DOD, HQDA, HQUSACE, and local activities. These programs are announced annually in HQDA's Catalog of Civilian Training, Education and Professional Development Opportunities. This catalog is also available on the Army Civilian Personnel Online at <http://www.cpol.army.mil>. The most popular recurring programs are described below. If you are interested in any of these programs or do not see a program you are interested in, please contact your HRD or CPAC to obtain more information.

### 1. HQDA Sponsored Long Term Training:

- a. The Military Colleges and Fellowship Programs include the National War College (NWC), Industrial College of the Armed Forces (ICAF), Army War College Resident Program (AWC), Army War College Corresponding Studies Program (AWC/CSP), Congressional Fellowship, and the Secretary of the Army Research and Study Fellowship (SAR&SF). Selections for Senior Service Colleges and the Army Congressional Fellowship program are made based on the following: employee motivation; knowledges, skills and abilities; and need for training. The selection criteria for SAR&SF include: outline of proposed study; publications or specimens of work; and need for training. Course descriptions for these programs follow.
- b. Competitive Professional Development Opportunities. This program includes four types of training: university training, developmental assignments, training with industry, and other. The program is announced annually in HQDA's Catalog of Civilian Training, Education and Professional Development Opportunities. The target audience for these programs is military-funded employees covered by HQDA career programs and in grades GS-11 and above.
- c. Other Programs. Other HQDA sponsored training opportunities are described in the annual publication of the Catalog of Civilian Training, Education, and Professional Development Opportunities. These programs include: the Army Sustaining Base Leadership and Management Program, Army Comptrollership Program at Syracuse, Professional Enhancement Programs, and Harvard University Programs. Application procedures and selection criteria are provided in the Catalog. Contact your HRO, CPAC, and/or career program manager to obtain additional information.

### 2. HQUSACE Sponsored Long Term Training.

This training consists of four programs: the Mission Related Graduate Program (MRGP), the Graduate Fellowship in Water Resources and Environmental Law (WREL) Program, the Coastal Engineering Education Program (CEEP), and the Project Management Program (PMP). Nominating procedures, eligibility criteria, and other general information are provided in ER 350-1-416, HQUSACE Centrally and Locally Sponsored LTT. The eligibility criteria includes the following: commander's endorsement, employee's statement of need, performance, supervisory statement of relevance of training to need, and post-training utilization.

## SENIOR SERVICE COLLEGES (SSC)

**AUDIENCE.** Department of the Army civilian employees at the GS/GM-14/15 level who have career status and are serving in permanent competitive appointments; Schedule A, Excepted appointments without time limitation; or, are serving under an Excepted Service appointment in the Civilian Intelligence Personnel Management System (Title 10 USC 1590) and have a minimum of 3 years of consecutive service under one or more permanent appointments. High potential GS/GM-13s will be considered for Army War College only.

**REQUIREMENTS.** Applicant must have or be able to obtain a TOP SECRET clearance prior to starting the training program. As part of the application process, applicants for SSC are required to sign a mobility agreement obligating them to accept reassignment. These post-graduate assignments may be located in the Continental United States (CONUS) or in an overseas area (OCONUS).

### DESCRIPTION OF PROGRAMS:

**The National War College (NWC):** Conducts senior-level instruction in national security strategy to prepare selected military officers and federal officials for high-level policy, command, and staff responsibilities. NWC focuses on national security policy and strategy with a joint, multiservice perspective. The curriculum is designed to expand and deepen students' knowledge of national security matters and to sharpen their analytical skills. The academic program consists of prescribed core courses, advanced studies, and regional studies. Teaching methods include lectures, seminar discussions, case studies, and student exercises. Location: Fort Lesley J. McNair, Washington, D.C. Length of Training: 10 months.

**The Industrial College of the Armed Forces (ICAF):** Prepares selected military officers and civilians for senior leadership and staff positions by conducting executive-level courses of study and associated research dealing with the resource component of



national power and its integration into national security strategy for peace and war. The curriculum focuses on broad-based national security decision-making for senior policymakers in a dynamic world environment. The curriculum consists of courses presented in a balanced mix of seminars and lectures. The program emphasizes the case method, complemented by extensive student reading, written and oral presentations, classroom analysis, lectures by faculty members and prominent outside authorities, and a field study program. Location: Fort Lesley J. McNair, Washington, D.C. Length of Training: 10 months.

**The Army War College (AWC) Resident:** Prepares selected military officers and civilians for senior leadership responsibilities in a strategic environment during peace and war. AWC studies the role of landpower, as part of a joint or combined force, in support of the U.S. national military strategy. The curriculum emphasizes theory, concepts, systems, and the national security decision-making process. The AWC teaches through numerous case studies, exercises, and wargames. The student seminar group is the fundamental learning vehicle at the school. Location: Carlisle Barracks, Pennsylvania. Length of Training: 10 to 12 months.

### **ARMY CONGRESSIONAL FELLOWSHIP PROGRAM**

**AUDIENCE:** Civilian employees at the GS/GM-13-15 level or above serving in career or schedule A appointments without time limitation.

**LENGTH OF PROGRAM:** 6 or 12 months

**DESCRIPTION OF PROGRAM:**

The Army Congressional Fellowship Program is designed to provide congressional training to top Army officers and civilians. This program supersedes all previous congressional fellowship programs and begins each year in August. Selected fellows will attend the Force Integration Course and participate in a Congressional Training Program. After completion of a one month classroom phase and orientation to HQDA, congressional fellows serve as staff assistants to Members of Congress. Fellows are typically given responsibility for drafting legislation, arranging congressional hearings, writing speeches and floor statements, and briefing Members for committee deliberations and floor debate.



## **SECTION 7 - IS FOR CORPS OF ENGINEERS ONLY**

### **SECTION 7**

#### **ARMY SERVICE SCHOOLS AND DEFENSE MANAGEMENT EDUCATION AND TRAINING (DMET)**

##### **GENERAL**

The courses in this section are listed by subject matter. Course descriptions, prerequisites, and length may be obtained from your local Training Officer. Source document for the Army Service Schools is the Army Formal Schools Catalog, DA Pamphlet 351-4 (Oct 93). The Defense Management Education and Training (DMET) Schools, information is contained in DOD 5010.16.C.

##### **NOMINATION PROCEDURES**

The USACE Professional Development Support Center (CEHR-P) receives the DOD quota's thru the SMDR (Structure Manning Decision Review) process which is accomplished 3 years prior to the FY the courses will be given. The quota's received are published to all training POC's, and are issued on a first come first served basis; upon receipt of a 1556. All requirements must be processed through your Training Officer to CEHR-P-RG. The employee's supervisor must submit a DD Form 1556 (Request, Authorization, Agreement, Certification of Training and Reimbursement) for all primary and space-available nominations to the training officer, who forwards them to:

Commander  
USACE  
Professional Development Support Center  
ATTN: CEHR-RG  
P.O. Box 1600  
Huntsville, Alabama 35807-4301

##### **COST**

There is no tuition charge for resident spaces for these classes, except Inspector General Auditor Training Institute. Organizations sponsoring onsite classes will be charged a fee.

##### **STUDENT NOTIFICATION**

TRADOC Service Schools. DA Pamphlet 351-4 provides telephone numbers and general reporting instructions for each school. Training officers and/or students should contact the school for additional information not mentioned in the DA Pamphlet.

Auditor School. A letter is sent to each student

prior to course start date.

Inspector General Auditor Training Institute. A letter is sent to each student prior to course start date.

Judge Advocate General School. Forwards reporting instructions to students prior to course start date.

##### **DMET Schools:**

Resident Courses. Students receive reporting instructions from the school before course start date.

Onsite Courses. Students receive reporting instructions from the hosting activity before course start date.

##### **SCHEDULES**

Schedules which include dates and locations may be obtained from your Training Officer in August/September for the next fiscal year.



**MAJOR ARMY SERVICE SCHOOL SPONSORS**

**SCHOOL CODE**

Academy of Health Sciences .....	28
Ft. Sam Houston, Texas	
Army Audit School .....	26
Washington, DC	
Army Chemical School .....	21
Ft. McClellan, Alabama	
Army Command and General Staff College .....	31
Ft. Leavenworth, Kansas	
Army Logistics Management College (ALMC) .....	6
Ft. Lee, Virginia	
Army Military Police School .....	23
Ft Leonard Wood, Missouri 6547-5000	
Army Quartermaster School .....	20
Ft. Lee, Virginia	
Army Safety Center .....	18
Ft. Rucker, Alabama	
Army Signal School .....	31
Ft. Gordon, Georgia	
Army Soldier Support, Finance School .....	24
Ft. Jackson, South Carolina	
Army Transportation Center and School .....	25
Ft. Eustis, Virginia	
Defense Information School .....	19
Ft. Benjamin Harrison, Indiana	
Defense Mapping School .....	29
Ft. Belvoir, Virginia	
Inspector General Auditor Training Institute .....	34
Ft. Belvoir, Virginia	
The Judge Advocate General's School .....	17
Charlottesville, Virginia	
School of Military Packaging Technology (SMPT) .....	7
Aberdeen Proving Ground, Maryland	
Air Force Institute of Technology (AFIT) .....	3
Wright Patterson AFB, Ohio	
Air Training Command .....	4
Lackland AFB, Texas	
Air University Center for Professional Development .....	15
Maxwell AFB, Alabama	
Army Defense Ammunition Center and School .....	8
Savanna, Illinois	



**MAJOR DMET SPONSORS**

**SCHOOL CODE**

Defense Institute Security Assistance Management (DISAM) .....	12
Wright Patterson AFB, Ohio	
Defense Logistics Agency (DLA) .....	33
Civilian Personnel Service Support Office	
Columbus, Ohio	
Defense Resource Management Education Center .....	10
Monterey, California	
Defense Security Institute (DSI) .....	9
Richmond, Virginia	
Defense Systems Management College (DSMC) .....	2
Washington, DC	
Information Resources Management College (IRMC) .....	1
Washington, DC	
Naval Transportation Management School .....	11
Oakland, California	



**LIST OF COURSES**

**ADP**

<b><u>COURSE TITLE</u></b>	<b><u>COURSE NUMBER</u></b>	<b><u>CONTROL NUMBER</u></b>	<b><u>SCHOOL CODE</u></b>
AIS STRATEGIES .....		459 .....	1
DOD CORP INFO MGT .....	41BC7 .....	451 .....	1
INFO ENGR MGT .....		453 .....	1

**AUDITOR**

<b><u>COURSE TITLE</u></b>	<b><u>COURSE NUMBER</u></b>	<b><u>CONTROL NUMBER</u></b>	<b><u>SCHOOL CODE</u></b>
ADV AUDIT TECHNIQUES .....		947 .....	
AIC REPORT WRITING .....		941 .....	26
AUDIT MGT .....		946 .....	26
AUDIT SUPERVISOR .....		945 .....	26
AUDIT SUPV WRITING .....		948 .....	26
AUDITOR-IN-CHARGE .....		994 .....	34
BASIC REPORT WRITING .....		943 .....	26
EFFECTIVE AUD PRES .....		996 .....	34
FRAUD AUDITING .....		995 .....	34
FINANCIAL STATEMENTS .....		998 .....	34
INTRO TO AUDITING .....		940 .....	26
INTRO AUDITOR TRNG .....		992 .....	34
INTRO FINANCIAL AUD .....		997 .....	34
INTERMEDIATE AUDITOR .....		939 .....	26
LEVEL II A .....		942 .....	26
SENIOR AUDITOR .....		944 .....	26

**ENVIRONMENTAL**

<b><u>COURSE TITLE</u></b>	<b><u>COURSE NUMBER</u></b>	<b><u>CONTROL NUMBER</u></b>	<b><u>SCHOOL CODE</u></b>
DEF HAZARD WASTE .....	56HWW .....	831 .....	6
EX ENVIRONMENTAL SEM .....	15EEM .....	846 .....	6
GEN TRANS HAZ MAT .....	56TPH .....	662 .....	8
HAZARDOUS MAT HDLG .....	56HMH .....	653 .....	7
HAZARDOUS MAT HDLG .....	56HMH .....	835 .....	6
HAZARD PROP MGT .....	56HPM .....	836 .....	6
INSTL TRAF MGT HAZ .....	56THZ .....	663 .....	8
METALS IDENT & RECVY .....	45MIR .....	842 .....	6
NEPA IMPLEMENTATION .....	54NEP .....	845 .....	6
PKG HAZARD MAT TRANS .....	56PHM .....	647 .....	7
PKG HAZ MAT TRAN-REF .....	56RPH .....	654 .....	7
TECH CHEM SURETY MAT .....	56TCS .....	665 .....	8
TECH TRANS HAZ MAT .....	56THM .....	664 .....	8



LIST OF COURSES (Continued)

LEGAL

<u>COURSE TITLE</u>	<u>COURSE NUMBER</u>	<u>CONTROL NUMBER</u>	<u>SCHOOL CODE</u>
ADMIN LAW MIL INSTL .....	37ALI .....	874 .....	17
CONTRACT LITIGATION .....	3700 .....	882 .....	17
FEDERAL LITIGATION .....	37FLT .....	875 .....	17
FED CRTS & BRDS LITI .....	37000 .....	877 .....	17
CONTRACT ATTORNEYS .....	37CAT .....	876 .....	17
ETHICS COUNSELOR .....	37000 .....	883 .....	17
FED LABOR RELATIONS .....	37FLR .....	878 .....	17
FISCAL LAW .....	41FSL .....	879 .....	17
GOVT CONTR LAW SYMP .....	37CLS .....	880 .....	17
GOVT MATERIEL ACQ .....	37GMA .....	881 .....	17
INSTALL CONTRACTING .....	37000 .....	885 .....	17
PROCUREMENT FRAUD .....	37PCF .....	886 .....	17

LOGISTICS

<u>COURSE TITLE</u>	<u>COURSE NUMBER</u>	<u>CONTROL NUMBER</u>	<u>SCHOOL CODE</u>
DEF INVENTORY MGT .....	45DIM .....	802 .....	6
DEF DIST MGT .....	45DDM .....	803 .....	6
INDUS MAINT MGT .....	41BBV .....	483 .....	3
INSTL LOG MGT .....	45ILM .....	805 .....	6
LOGISTICS EX DEV .....	15LED .....	808 .....	6
LOGISTICS MGT DEV .....	45LMD .....	809 .....	6

MANAGEMENT

<u>COURSE TITLE</u>	<u>COURSE NUMBER</u>	<u>CONTROL NUMBER</u>	<u>SCHOOL CODE</u>
ARMY INSTL MGT .....	15AIM .....	810 .....	6
ARMY MAINTENANCE MGT .....	45AMM .....	811 .....	6
SCTY ASST MGT-EX .....		690 .....	12

PACKAGING, SHIPPING, AND STORAGE

<u>COURSE TITLE</u>	<u>COURSE NUMBER</u>	<u>CONTROL NUMBER</u>	<u>SCHOOL CODE</u>
BASIC PRESER & PKG .....	45BPP .....	643 .....	7
DEF PACKAGING DESIGN .....	45DPD .....	649 .....	7
DEF PKG LOG MGR .....	15PLM .....	650 .....	7
DEF PKG/UTILIZATION .....	45DPU .....	646 .....	7
HAZARDOUS MAT HDLG .....	56HMH .....	653 .....	7
MARKING SHIPMT/STOR .....	45MSS .....	645 .....	7
PKG HAZARD MAT TRANS .....	56PHM .....	647 .....	7
PRES/INTERMED PROT .....	45000 .....	651 .....	7
VECH PROC SHIP/STOR .....	45VPS .....	652 .....	7



LIST OF COURSES (Continued)

**PROCUREMENT/CONTRACTING**

<b><u>COURSE TITLE</u></b>	<b><u>COURSE NUMBER</u></b>	<b><u>CONTROL NUMBER</u></b>	<b><u>SCHOOL CODE</u></b>
ADV COST/ECON ANAL .....	41JQI .....	491 .....	3
CONTRACT ASPECTS/VE .....	41AVE .....	494 .....	3
CONTRACTING OFF REP .....	41BA9 .....	814 .....	6
EX REFRESH-PROG MGT .....	15BB8 .....	469 .....	2
INTRO UTIL CONTR .....	41000 .....	522 .....	4
INTRO/LIFE CYCL COST .....	41LCC .....	500 .....	3
MATERIAL ACQ MGT .....	41MAM .....	820 .....	6

**PUBLIC AFFAIRS**

<b><u>COURSE TITLE</u></b>	<b><u>COURSE NUMBER</u></b>	<b><u>CONTROL NUMBER</u></b>	<b><u>SCHOOL CODE</u></b>
BASIC JOURNALIST .....	52BJN .....	894 .....	19
INTERMED PHOTOJOURN .....	52IPH .....	895 .....	19
PUBLIC AFFAIRS OFF .....	52PAO .....	896 .....	19
SR PUBLIC AFFAIRS .....	21SPA .....	899 .....	19
THE EDITOR .....	52TED .....	900 .....	19

**RESOURCE MANAGEMENT**

<b><u>COURSE TITLE</u></b>	<b><u>COURSE NUMBER</u></b>	<b><u>CONTROL NUMBER</u></b>	<b><u>SCHOOL CODE</u></b>
ADV QNTY COST ANAL .....	41JQJ .....	503 .....	3
ANAL PERF MEAS DATA .....	41000 .....	504 .....	3
ADV MGT ACCT ANAL .....	42AMA .....	915 .....	24
COMMER ACCTS ADMIN .....	42CAA .....	917 .....	24
DEF RESOURCES MGT .....	41BAI .....	678 .....	10
DISB OPERATIONS .....	42DBO .....	918 .....	24
INTRO/LIFE CYCL COST .....	41LCC .....	500 .....	3
MANPOWER & FORCE MGT .....	46MFM .....	830 .....	6
MILITARY ACCOUNTING .....	42MAC .....	919 .....	24
PPB&ES .....	42PPB .....	921 .....	24
PROF MIL COMPTROLLER .....	15PMC .....	872 .....	15
RESOURCE MGT BUDGET .....	42RMB .....	922 .....	24
RESOURCE MGT TACT .....	42RMT .....	926 .....	24
SCTY ASST MGT-FIN .....	.....	691 .....	12
TRAVEL ADMIN/ENTITLE .....	42TAE .....	927 .....	24

**SAFETY**

<b><u>COURSE TITLE</u></b>	<b><u>COURSE NUMBER</u></b>	<b><u>CONTROL NUMBER</u></b>	<b><u>SCHOOL CODE</u></b>
ARMY SAFETY PROG MGT .....	58SPM .....	889 .....	18
FUND ARMY ACC PREV .....	58FAP .....	890 .....	18
RADIOLOGICAL SAFETY .....	59RAS .....	906 .....	21
OPER RADIATION SAFE .....	590RS .....	907 .....	21



LIST OF COURSES (Continued)

**SECURITY**

<b><u>COURSE TITLE</u></b>	<b><u>COURSE NUMBER</u></b>	<b><u>CONTROL NUMBER</u></b>	<b><u>SCHOOL CODE</u></b>
BASIC INDUS SCTY SP .....		671 .....	9
COMSEC CUSTODIAN .....	51SCC .....	973 .....	30
DOD SECURITY SPEC .....	55DSS .....	677 .....	9
INDUS SCTY EX SEM .....		669 .....	9
INDUS SCTY MGT .....		670 .....	9
INFO SCTY ORIEN .....		673 .....	9
INFO SCTY MGT .....	55ISM .....	674 .....	9
PERS SCTY INVES .....	55PSI .....	675 .....	9
PHYS SEC/CRIME PREV .....	55CPC .....	910 .....	23
SCTY ASST MGT-CONUS .....		694 .....	12
SCTY ASST MGT-EX .....		690 .....	12
SCTY ASST MGT-FIN .....		691 .....	12
SCTY ASST MGT - FPE .....		697 .....	12
SCTY ASST MGT - FTO .....		692 .....	12
SCTY ASST MGT-OCONUS .....		695 .....	12
SCTY ASST MGT - PROG .....		693 .....	12
SCTY ASST MGT-TNG .....		696 .....	12
COMBATING TERRORISM .....	55TMI .....	911 .....	23

**TRANSPORTATION**

<b><u>COURSE TITLE</u></b>	<b><u>COURSE NUMBER</u></b>	<b><u>CONTROL NUMBER</u></b>	<b><u>SCHOOL CODE</u></b>
GENTRANS HAZ MAT .....	56TPH .....	662 .....	8
HAZARDOUS MAT HDLG .....	56HMH .....	835 .....	6
HAZARD PROP MGT .....	56HPM .....	836 .....	6
INSTL TRAF MGT HAZ .....	56THZ .....	663 .....	8
MILSTAMP .....	45SMP .....	936 .....	25
TECH TRANS HAZ MAT .....	56THM .....	664 .....	8
TRANS & STOR HAZ MAT .....	56TPH .....	681 .....	11

**TRANSPORTATION MANAGEMENT**

<b><u>COURSE TITLE</u></b>	<b><u>COURSE NUMBER</u></b>	<b><u>CONTROL .....</u></b>	<b><u>SCHOOL CODE</u></b>
DEF ADV TRAFFIC MGT .....	45ATM .....	934 .....	25
INSTL TRAFFIC MGT .....	45ITM .....	935 .....	25
PASSENGER TRAVEL SPC .....	45PTS .....	937 .....	25
PERS PROP TRAF MGT .....		683 .....	11
PHYS DISTR MGT .....		684 .....	11
TRANS MGT INTRO .....	45TMI .....	685 .....	11
TRANS MGT ADVANCED .....		686 .....	11



LIST OF COURSES (Continued)

**MISCELLANEOUS**

<b><u>COURSE TITLE</u></b>	<b><u>COURSE NUMBER</u></b>	<b><u>CONTROL NUMBER</u></b>	<b><u>SCHOOL CODE</u></b>
ARMY ENERGY COORD .....	54AEC .....	837 .....	6
BASIC GEO SURVEYING .....	31BGS .....	971 .....	29
COST EST FOR ENGRS .....	35CEE .....	838 .....	6
DEC RISK ANAL LOG .....	46DRL .....	840 .....	6
DECISION RISK ANAL .....	46DRA .....	839 .....	6
DRIS AGREEMENTS .....	45RIS .....	843 .....	6
NEPA IMPLEMENTATION .....	54NEP .....	845 .....	6
EX ENVIRONMENTAL SEM .....	15EEM .....	846 .....	6
LEAD TTT .....	48LDT .....	977 .....	31
MOBIL & DEPLOYMENT .....	46MDP .....	938 .....	31
ORG LEADERSHIP EX .....	12OLE .....	976 .....	31
TECH CHEM SURETY MAT .....	56TCS .....	665 .....	8